The Beaver

A MAGAZINE OF THE NORTH

PUBLISHED QUARTERLY BY Hudson's Bay Company. OUTFIT 280 JUNE 1949

INCORPORATED 2ND MAY 1670.

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ONE DOLLAR A YEAR

PUBLISHED QUARTERLY BY

HUDSON'S BAY HOUSE — Hudson's Bay Company. INCORPORATED 2ND MAY 1670. — WINNIPEG, CANADA

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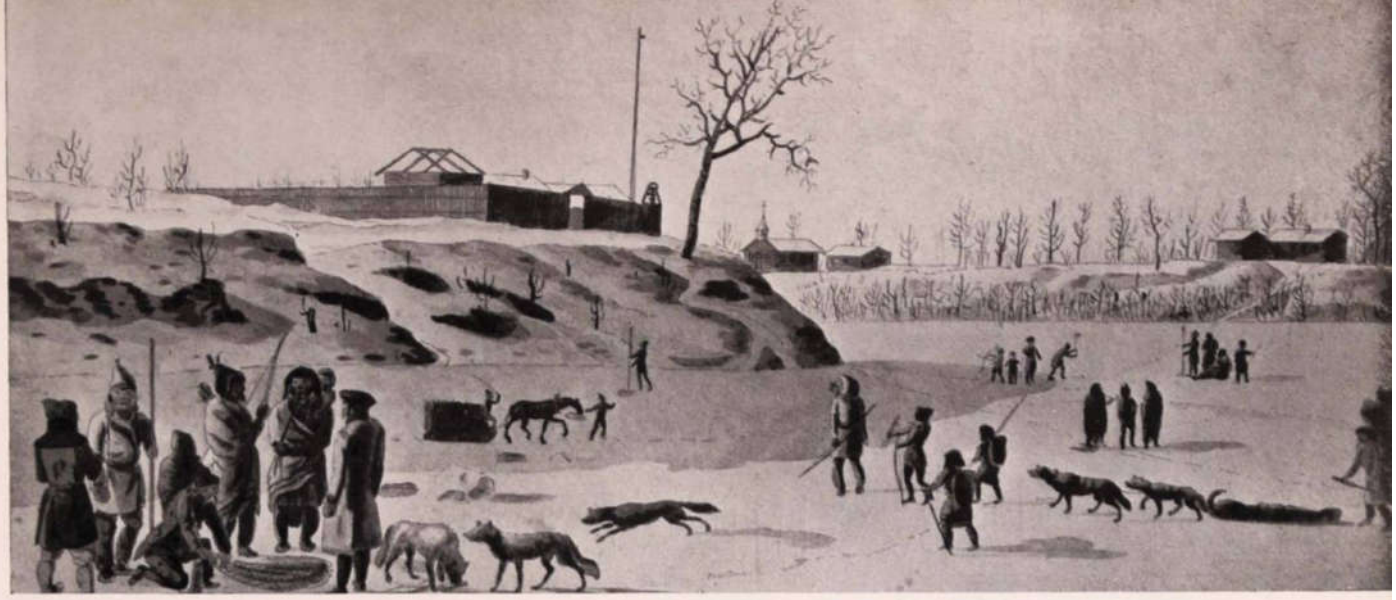


Fort Gibraltar at the junction of the Red and Assiniboine (foreground), which became the first Fort Garry. From a painting in the Public Archives of Canada done in 1821 by Peter Rindisbacher, one of the Swiss settlers who arrived that year.

Winnipeg and the HBC

by Margaret Arnett MacLeod

WHEN Winnipeg celebrates its seventy-fifth birthday this month, the Hudson's Bay Company will have a unique and intimate interest in the occasion. For it has Winnipeg's background in its pocket. That background is Company history.

The first settlement and, some sixty years later, the first city in Western Canada (both unwanted by those in the fur trade country), Winnipeg grew in Company territory where the Assiniboine river joins the Red. The settlement was the Company's own idea, initiated by the Earl of Selkirk; while the city germinated as a group of opposition traders' buildings near Fort Garry. The Company ended by establishing the one and encouraging the other, finally making Winnipeg its Canadian headquarters.

The place that was to cradle Winnipeg, where today Greater Winnipeg's population of over 300,000 is centred, was drawn to the Company's attention as early as 1767 by a servant, William Tomison, who in that year came to the fork of the Red and Assiniboine rivers. The strategic and commercial value of this position had been early recognized, as it was an ancient Indian trading centre and a favourite Indian encampment even before La Vérendrye saw it in 1738.

Tomison was probably the first Company man to see the site of Winnipeg, but it had no interest for either him or the Company. In 1767 they were busy preparing to contest the fur trade with the "Pedlars" from Canada, in the country farther west. The Fork's only significance lay in its proximity to the buffalo plains to the south, as it supplied pemmican at Lake Winnipeg to brigades going over the main cross-continent route there. Not until settlement began in 1812 did the Hudson's Bay Company begin to take a real interest in the locality.

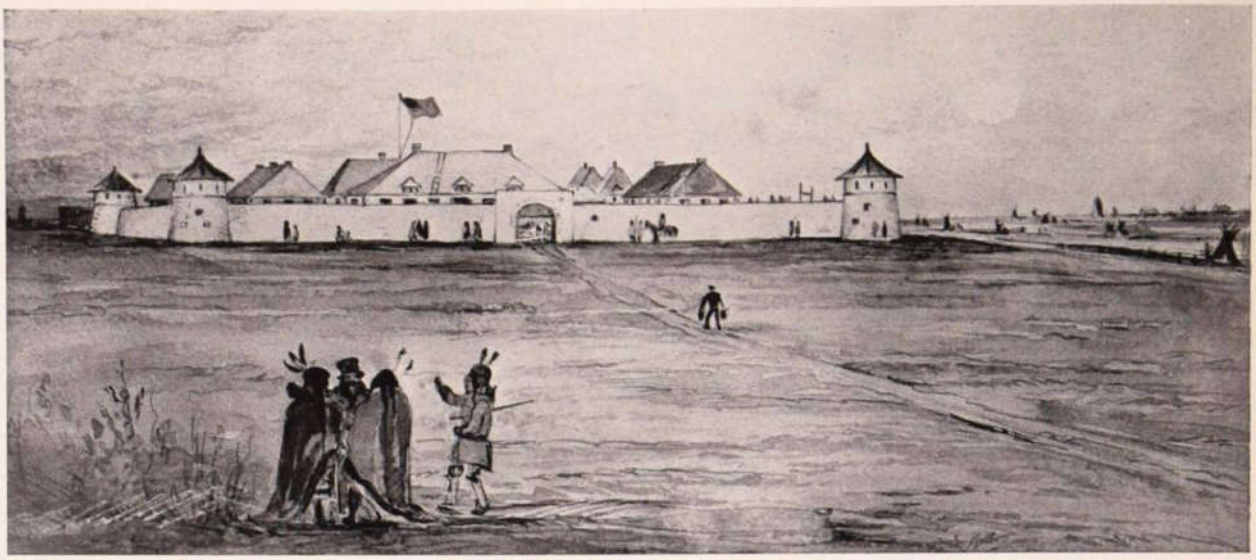
When the vanguard of Lord Selkirk's colonists under their governor, Miles Macdonell, arrived at the Forks that year they found there only the Northwesters' Fort Gibraltar, which had been built about 1809 on the point of land where "the beautiful confluence of the Assiniboine and Red River washed the base of the bluff."

By this time the North West and Hudson's Bay companies had contested the fur trade from the Athabasca down to the Assiniboine country, matching post with post, and they were now approaching the bitter struggle in which the contest ended. The Hudson's Bay Company, however, had not contested Fort Gibraltar directly at the Forks. In 1812, they had two posts in the region: Fort William on the lower Red River below today's town of Selkirk, in charge of William Hillier; and Fort Skene built in 1801 near the North West Company's post at Pembina, under Hugh Heney. And these two men had been named in the colonization grant to Lord Selkirk as attorneys to act for the Company.

The incidents that led to the founding of the first Hudson's Bay Company post on Winnipeg's site three years later are full of human interest and intrigue. Miles Macdonell, a poor choice to plant the colony, Hugh Heney, an opportunist who over-reached himself, and William Hillier in the background, were the chief actors.

In the spring of 1813 Heney started John McLeod, a settler whose services he had commandeered, at building a trading post for the Company on the east bank of the Red river nearly opposite Fort Gibraltar. Macdonell complained to Superintendent William Auld at York Factory and to Lord Selkirk that it was being built to annoy the colony, and he asked that it be removed.

Then Macdonell and Hillier both reported to Auld that Heney was an embezzler, and Heney was relieved of his charge. But Macdonell later changed his tune, and expressly asked that a trader be placed



The second Fort Garry in 1858, from the south. A hitherto unpublished water colour by W. H. E. Napier, reproduced by courtesy of Mrs. Geo. S. Currie.

with him. In July 1814 the little log store that McLeod had built the previous year, was opened. Thus the Hudson's Bay Company first did business at the Forks on the St. Boniface side of the Red River.

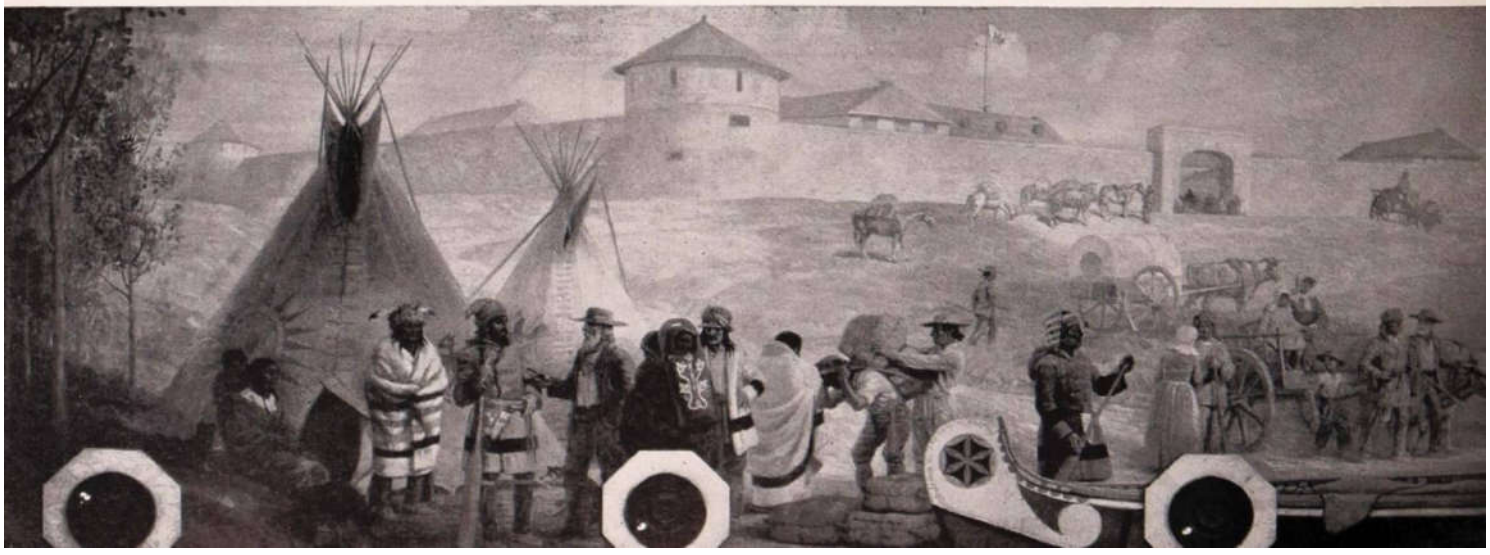
The following spring, on account of the violent conduct of the Northwesters, this small trading house was rafted across the river and re-erected on the west bank near the colonists' fort for safety. And there, in 1815, in the vicinity of today's Robert Street, the Hudson's Bay Company began business on Winnipeg's site.

The officer who thus acted in an increasingly critical situation was the Company's official surveyor, Peter Fidler. After the Northwesters burned the colony to the ground in 1815, Fidler built the Company's second place of business in the re-established settlement of 1817. This fort was situated between Winnipeg's Notre Dame Avenue East and McDermot Avenue, near a rise in the ground a few hundred yards from the river. Fidler carried out the construction of it during 1817-18, and it was finished in 1819 by James Sutherland.

Donald Murray, a settler, when questioned in 1887, said he remembered sleeping in this fort, and he recalled it as a palisaded enclosure of considerable size, with the principal entrance facing south exactly toward the point of land between the two rivers. The fort followed a common fur trade pattern with the master's house at the far end facing the gate, smaller buildings ranging down the sides of the enclosure, a walk between the houses and the palisades, and an open courtyard in the centre.

In 1821, James Bird, Company officer at Red River, was host there to Nicholas Garry, a Company director who had come from England in connection with the union of the two warring fur companies. Garry also visited Fort Gibraltar, which had been demolished in retaliation by the colonists in 1816 and was then partially rebuilt, and he advised that as it was in a better situation on the point between the two rivers, the new Hudson's Bay Company should make it their headquarters. It was sufficiently rebuilt in May, 1822, that Governor George Simpson could report from Red River that the Company "would move into the North West buildings in the fall . . . which he purposed be called Fort Garry to commemorate Mr. Garry's visit."This is the first mention history makes of the name that has become famous throughout the West.

Waterfront activity below Fort Garry in 1861, with the Company's sternwheeler "Pioneer" (formerly "Anson Northup") discharging goods t



Additions were made to the Fort Gibraltar buildings, and the result was the fort Alexander Ross described in 1825. This first Fort Garry was no doubt akin to its primitive surroundings, yet because of its importance in the country as Red River's seat of government and centre of commerce, it was probably idealized.

Ross, arriving from the Columbia, and approaching it on horseback on a July evening, wrote: "I was anxious to see the place, I had heard so much about it, but I must confess that I felt disappointed. Instead of a place walled and fortified as I had expected, I saw nothing but a few wooden houses huddled together . . . used as dwellings and warehouses . . . Nor was the Governor's residence anything more in its outward appearance than the cottage of a humble farmer, who might be able to spend fifty pounds a year." Yet, even in his disappointment, Ross saw the place as "the metropolis of the country" and as evidence of its "settled and tranquil state."

The Company's forts of 1815 and 1817 had been part of the struggle to obtain a foothold in the region. The first Fort Garry, built where the Company since remained, saw the beginning of a different struggle, one that continued until after the province of Manitoba was formed in 1870—that of creating a self-supporting and productive settlement.

Red River was an atom of settlement in the middle of a continent; fifteen hundred miles from the nearest city in the east, six hundred miles from any other outlet to the rest of the world, and until easy communications were established after Manitoba was formed its isolation defeated all efforts toward any real progress.

It is difficult in modern Winnipeg to realize the long decades of discouraging endeavour, and the fortunes that were expended uselessly, before any worthwhile productiveness from the soil was achieved. The settlers cultivated only the land on the river banks, so that flour in considerable quantity was still coming from England in the 1850's, and was imported even after Manitoba was formed in 1870.

Governor Simpson launched scheme after costly scheme in food production and in manufacture with no resulting success. After a loss of about $35,000 in one enterprise he exclaimed in desperation: "Red River is like a Libyan tiger: the more we try to tame it, the more savage it becomes . . . for every step I try to bring it forward, disappointments drag it two backward!"

Simpson also revived Lord Selkirk's project of building a winter road to Hudson Bay, to provide a more practical outlet for the country. But what had been a vexatious and expensive failure for Selkirk proved to be the same for Simpson—and even today in the accomplishment of the idea the original problematical atmosphere seems to cling to it.

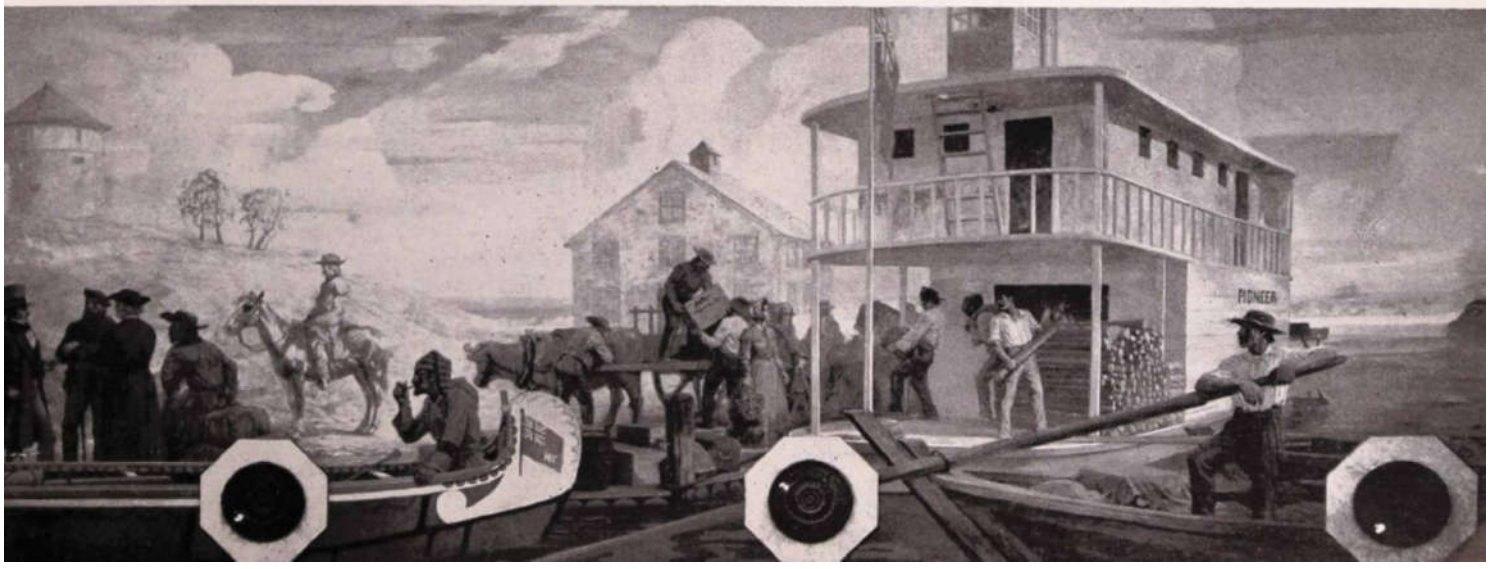
In 1826 the worst flood in the history of this region wiped out almost the whole settlement. All that had been achieved was washed away and the settlers were left destitute. Fidler's fort and the colonists' Fort Douglas met their end, and though Fort Garry still stood, it was so badly damaged that Simpson decided to abandon it and build a new headquarters down the Red River. Therefore, no attempt was ever made to restore the first Fort Garry.

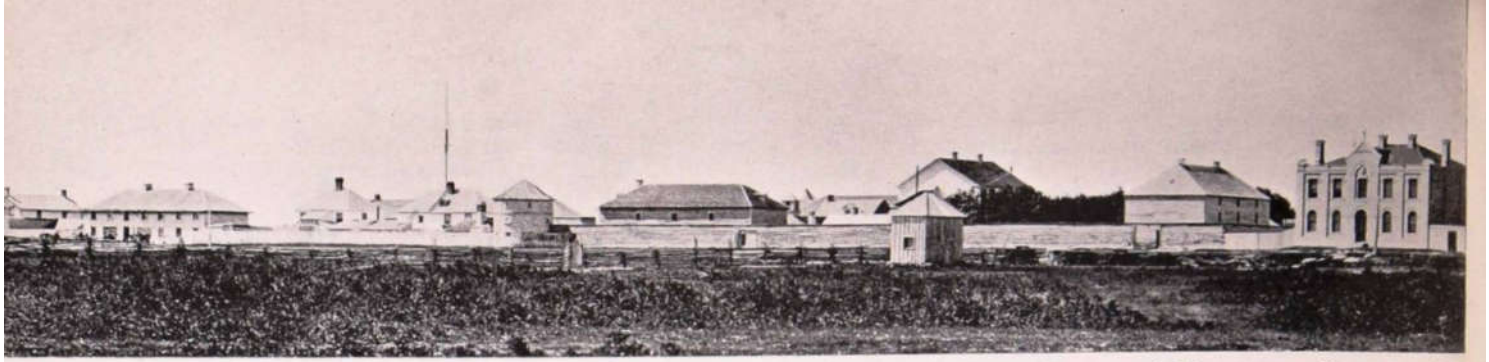
During the re-establishment of the colony Governor Simpson lived for three years at Red River. He married in England in 1830 and brought his wife to live in a renovated house in the ruined fort while the new headquarters, Lower Fort Garry, was being built. And at the Upper Fort he told of the difficulty in keeping "the Dust and Filth which collects in heaps from our muddy and crumbling walls" out of goods in the stores.

It has been widely thought that the Company's headquarters were continuously on the site of Winnipeg, but in 1832, as planned, they moved their chief business centre to the Lower Fort, where for a period it remained. During that time there was little activity at the deserted Upper Fort, though no doubt the buffalo hunt continued to be outfitted there. Only a clerk and a helper were left at the shop, and in December 1832, James McMillan on the nearby Company farm reported the Forks "very dull, as the usual stir of Ft Garry is now down at the new establishment where the Govr makes his headquarters, and the Good old Fort gone to ruins."

A few years later, for some undiscovered reason, the Governor reversed his decision about the situation of the Company's business centre, and decided that it should again be at the Forks. Consequently, he spent the winter of 1834-35 at old Upper Fort Garry in making preparations to build a new headquarters there. Pierre LeBlanc, the skilled builder who had carried out the construction of the Lower Fort, established camps that winter at Lake Winnipeg and on the Assiniboine river to get out the necessary timber. In the spring of 1835 a second Upper Fort Garry was begun on the site of Winnipeg,

ave come by way of St. Paul. A mural by A. Sherriff Scott, R.C.A., above the elevators on the main floor of the Company's Winnipeg store.





Fort Garry about 1880. On the left between the stone bastions is the part built in 1836, originally surrounded by a stone wall; on the right, the northern half, built in the 1850's and surrounded by walls of squared logs. Government House is the tall white building. The present stone gate is behind the H B C office building on extreme right.

situated a little to the west of the old one; but the old buildings continued to be used for many years after the new fort was built.

In 1838, James Hargrave reported to the Governor: "The new Fort is completed and securely walled in, with two excellent Bastions which completely sweep every side and render it the securest as well as the best finished Fort the Company has in Rupert's Land." Two additional bastions were built before 1845, when Simpson described it as "a quadrangle of 240 x 250 feet, with stone walls 15 feet high and four corner bastions." It is possible to judge of the fine construction of this fort, since the builder's work still stands at Lower Fort Garry.

R. M. Ballantyne, who was a clerk at the Upper Fort in the Forties, described the sparsely fitted counting-room there. It was an office by day, furnished with "two large desks and several very tall stools, besides sundry ink-bottles, rulers, books, and sheets of blotting paper." But at night the room was transformed when the clerks gathered there for their fun around the huge fireplace in one corner piled with blazing logs on end. The clerk's three bedrooms with doors always open gave on this room, and lent a background of colour with scarlet sashes, bright-hued clothing and gay shot-belts hanging on nails driven into the walls.

For thirty-five years this stone-walled fort was the stirring centre of the settlement, with the outfitting of boat brigades, the buffalo hunt or Northern Packet; with the comings and goings of the colonists, and the colourful canoe men, freighters and Métis hunters. Officers—in earlier years wearing semi-military uniforms and the regulation side-arms—were impressive figures, arriving or departing with ceremonious salutes from the fort cannonon their laborious journeys from coast to coast. Some of these men were making history, pushing forward the frontiers of civilization and discovering new rivers and new coastlines in the far north and west. Big game hunters, scientists, members of the nobility from England and other travellers, formed a body of guests in the fort at which the clerks were inclined to grumble; but all these visitors recalled with pleasure its unbounded hospitality.

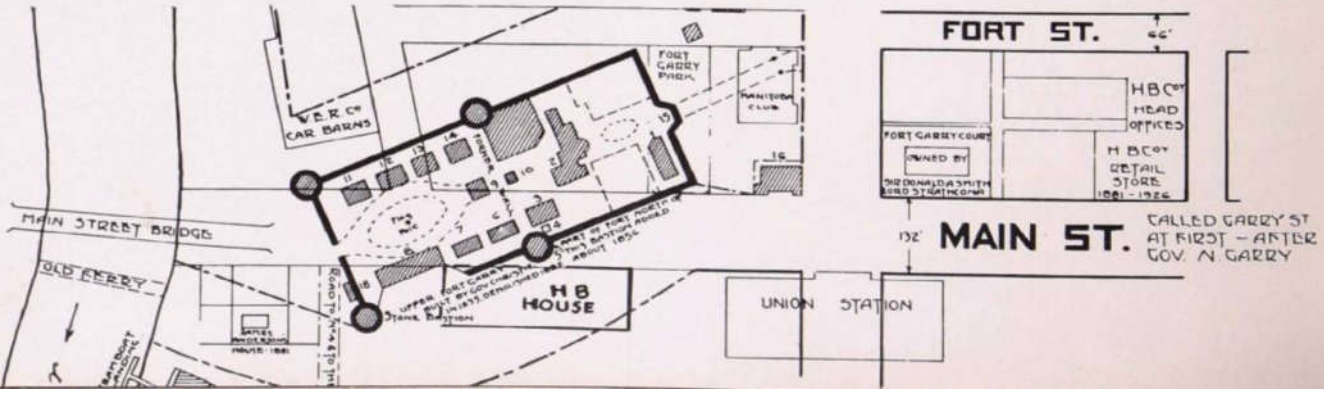
In 1852, this Fort Garry, too, suffered by flood, but the damage was not extensive as the water rose only six and a half feet in the buildings. However, the plains were like a sea, and dislodged houses swept by the fort day after day in the rising waters. On the evening of May 11, Dr. Cowan, the young fort surgeon, had been looking anxiously out of his windows toward the "Point," where a bastion and two buildings of the first Fort Garry stood with the swirling flood beating against them for the second time in their history. Later that night he wrote in his diary: "River has now entered the Fort gate. Have packed for removal tomorrow, river almost certain to be in my rooms tonight. Saw a light in the nunnery tonight, everywhere else in darkness. Old bastion at the Point tilted over into the water." This was the last of the first Fort Garry. The two buildings on the point survived the flood but they were torn down when the waters subsided.

In the fifties Upper Fort Garry was enlarged. The north wall was removed, and the fort was extended in that direction. The new walls were of squared oak timbers, and the fort gateway which still stands was built at this time. Chief Factor A. H. Murray, it is said, sketched the design on the back of an envelope.

Swift changes were witnessed at Fort Garry in the 1860's: the whistle of a steamboat on the Red River, extended postal service, the publication of a weekly newspaper, and the establishment there of the seat of government for all Rupert's Land. Thus, for two periods—from 1830-33, and during the 1860's—the settlement became the centre of the huge fur trade empire, which covered the greater part of the present Dominion of Canada.

The transfer of Rupert's Land to Canada brought resistance from the Métis in 1869, a storm that came to a climax when Louis Riel and his followers occupied Fort Garry late in that year, and which ended as Colonel Wolseley and his troops marched up the muddy road to the fort in the rain on August 24, 1870. They found the fort empty, and Riel gone.

Fort Garry in 1876 shown in relation to the present streets and buildings. 8 is the retail store, 2 Government House, 15 the present stone gate.



In 1870 the province of Manitoba was formed and Canada took over the West. Isolation and the long struggle to make it possible for a people to live here in comfort and security ended with increasing access to the outer world. After 1870 there were no more acute periods of food scarcity; the last was in 1868.

Fort Garry was named as the capital of Manitoba, and the lieutenant-governor of the province took up residence in the governor's house there. By this time, there were thirteen main buildings inside the fort and a few outside, with a steamboat warehouse—an up-to-the-minute accommodation—on the bank of the Assiniboine, and soon after, a mill.

With the incorporation of Winnipeg in 1873, the doom of Fort Garry was sealed. First the stone walls were replaced by a fence giving access to the trading store without going through the fort gate. Then, with land values soaring, it was decided to demolish the southern half.

Evidently, no one saw the old fort as it was described at the time in *Harper's Magazine*, as "The most interesting object in Winnipeg . . . the only thing which has anything picturesque about it, standing well up above the swift muddy current of the Assiniboine with an air of antiquity and romance about the rough grey walls . . . the low gateway, the rude turrets, and the Company's flag floating above the little quadrangle where for so many years white man and red man had met to barter the products of Europe for the skins of the wild north land."

Down came the bastions, four of the warehouses were moved to the Company's nearby mill, and the southeast half of the fort was demolished so that Main street could run straight to the new iron bridge over the Assiniboine.

That was in 1882, when the retail business was transferred to a new red-brick department store on the same side of Main Street. By that time, the Winnipeg land boom was on, and fifty-six lots on the site of the old fort were sold (on paper only) for $280,000—almost a fifth of the cash sum which Canada had paid to the Company for the whole of Rupert's Land. Then, as it was described at the time, "Winnipeg's boom burst." Fictitious values ended. Immediately, property could not be sold for the amount of the mortgage, fortunes disappeared over night even as they had come, and the sale of Fort Garry's site was not completed.

The governor's house and the buildings surrounding it stood until the spring of 1888, when they were sold —Government House itself, once "the finest building in the country," as the *Free Press* said, going for the pitiful sum of $100. Some of the other buildings were taken down and re-erected elsewhere in the city, and all that was left to mark the site of the fur trade empire's capital was the stone gate that still remains. In 1897, together with the four lots on which it stood, that gateway was presented by the Company to the city of Winnipeg.

Across the way from the little park in which it stands is Hudson's Bay House, headquarters of the Company in Canada. As if to link today with yesterday, its southwest corner, where the Canadian Committee meets each week, occupies part of the old fort site, where the retail trading store once stood. The retail trade itself, through which most Winnipeggers come in contact with "The Bay," was carried on for forty-four years in the red brick building on Main Street, and was moved in 1926 to the present magnificent stone structure on Portage Avenue.

The Company's present retail store at the corner of Portage Avenue (foreground) and the Mall.

"Commander Ross Planting the British Standard on the True Position of the Magnetic Pole" is the title of this fanciful engraving. The original is found in a rare book by Robert Huish on Sir John Ross's voyage of 1829-33.

The North Magnetic Pole

by R. G. Madill

THE north magnetic pole is an area rather than a definite point. There the earth's magnetic field, which in equatorial regions is parallel to the surface of the globe, is exactly vertical, and the dipping needle points towards the centre of the earth. The compass needle is useless as the horizontal force required to hold it in its direction has vanished. The pole does not remain rigidly fixed in one position. It describes a daily orbit of more or less regular character, but during severe magnetic disturbances, which are usually attended by sunspots and auroras, it moves rapidly and erratically about in an area whose radius is of the order of fifty miles.

The whereabouts of the north magnetic pole has been the subject of lively scientific discussion during the past 250 years, and the Dominion Observatory has become more and more interested in the problem since its magnetic surveys were extended to Arctic regions in 1922. In that year the writer reached Nueltin Lake—the Island Lake crossed by Samuel Hearne on his journey from Churchill to Coppermine—having made magnetic observations along the canoe route from The Pas. Twenty-five years later the network of Arctic magnetic stations had been extended to surround the pole area with sufficient density to enable a position of the pole to be announced with some assurance.

During the quarter of a century in which the writer has been engaged in efforts to locate the magnetic pole, either by making observations in the Arctic regions or by directing the work of others, scientists in other lands have been endeavouring to locate the pole by computation.

In 1923 Dyson and Furner made an analysis of the earth's general magnetic field, using data for declination, dip and horizontal intensity applying generally to south of latitude 60° N., and obtained a position of latitude 75° N., longitude 100° W., for the north magnetic pole. This placed the pole just about on the southern coast of Bathurst Island.

Soviet scientists gathered magnetic data during the Sedov drift, 1937 to 1940, which were analyzed by Weinberg and suggested the existence of a second magnetic pole at latitude 86° N., longitude 178° W. This hypothesis was reported to be corroborated by magnetic data secured by the 1941 expedition of the U.S.S.R. N-169 aircraft. Soviet scientists have referred, also, to the probability of another secondary pole in the Sverdrup Islands in the Canadian sector of the Arctic.

In 1943 Sir Harold Spencer Jones, Astronomer Royal, carried out an analysis of the general magnetic field of the earth similar to that made by Dyson and Furner, but using more recent data. The best position of the north magnetic pole arising from this analysis was latitude 76° N., longitude 102° W., on Erskine Inlet, Bathurst Island. Jones was of the opinion that this was the maximum northerly position the pole could occupy at the time, but there was a

possibility of it being a reasonable distance south from this position.

The polar flights of the R.A.F. Lancaster aircraft *Aries* in 1945 afforded excellent opportunities of securing evidence for or against the Bathurst Island location of the magnetic pole. The aircraft was fitted out with a full complement of recent types of magnetic navigating instruments, which were in charge of Wing Commander Maclure. One interesting flight was made from Goose Bay to the northeastern part of Prince of Wales Island and return to Dorval. During this flight the old position of the magnetic pole on Boothia Peninsula was passed over twice. Another interesting flight was from Whitehorse to Shawbury, Shropshire, England, which passed to the north of Bathurst Island and about eighty miles from the Erskine Inlet location of the pole as computed for 1943. When the magnetic results were analyzed it was apparent that the north magnetic pole was not as far north as Bathurst Island but was much closer to it than to the former position on Boothia.

By the end of 1946, the Dominion Observatory magneticians had infiltrated to the southern and eastern approaches of the magnetic pole area and had secured sufficient evidence on the ground to indicate the possibility of the pole being on Somerset Island in the vicinity of latitude 73° 15′ N., longitude 94° 30′ W. This position was tentative, as there appeared to be definite possibilities of a more westerly location which could only be confirmed following the occupation of magnetic stations to the north and west of the suspected area. Opportunities were afforded in 1947 of establishing stations to the north, south, and southwest, and the results of the season's work, combined with those of previous years, clearly indicated the pole to be on Prince of Wales Island near the eastern coast of Ommanney Bay. *The approximate position was latitude 73° N., longitude 100° W.*

The United States Air Force added considerable interest to the discussion in 1947 when a tremendous number of compass readings made during Arctic flights were analyzed. An announcement was made that there were three north magnetic poles, the main pole being on Prince of Wales Island near the Dominion Observatory's location, a strong secondary pole not far from Jones's Bathurst Island position, and a weaker secondary in the vicinity of Ross's pole on Boothia Peninsula.

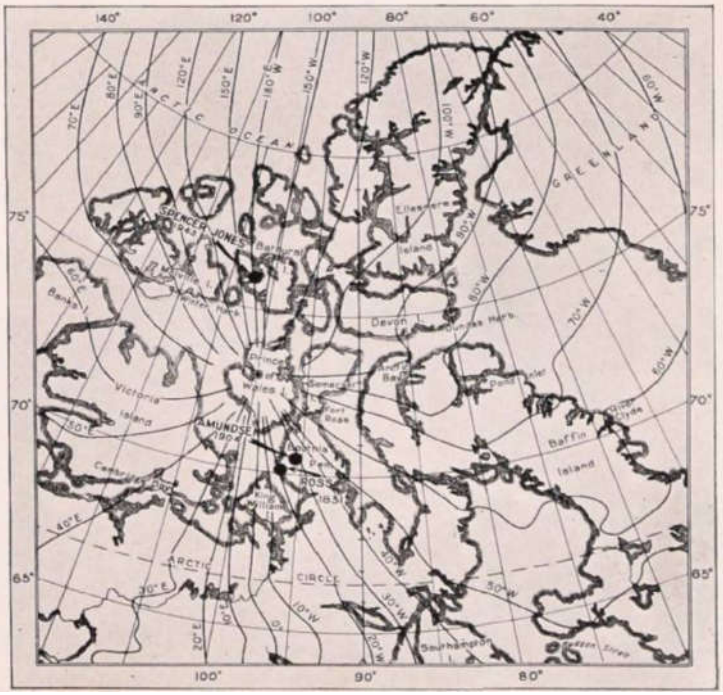
In 1948 the Dominion Observatory established magnetic stations to the north, west, and south of the pole area. The results from these stations confirmed the position on Prince of Wales Island announced in 1947. A station was occupied on Pell Inlet, Bathurst Island, within about eight miles of the computed 1943 pole, and no evidence was secured to suggest the presence of either a primary or secondary pole in the locality. Likewise, a station was occupied on Pasley Bay, Boothia Peninsula, within a reasonable distance of the former site of the magnetic pole, and no evidence of a secondary pole in that area was forthcoming.

It is interesting at this point to look back and briefly review the highlights in this centuries-old discussion of the whereabouts of the north magnetic pole. The earliest definite mention of the use of the magnetic compass in Europe was towards the end of the twelfth century. From that time to the beginning of the seventeenth century, it was believed that the north end of the compass needle pointed to the pole star or some pole of the heavens. Some vague doubts arose when Columbus, while on his voyage to the New World in 1492, discovered that the compass did not always point true north, and the angle between true and magnetic north, termed the declination or variation of the compass, changed with its position on the earth. Magnetic declination was first noted on land at Rome in 1510.

In 1600 Dr. Gilbert published a book in which he stated that the earth itself was a great magnet and all magnets on its surface pointed to the earth's magnetic poles. These magnetic poles were coincidental with the north and south poles of the earth, a condition which was a consequence of Gilbert's belief that the magnetic field was the cause of the earth's rotation about its axis. The converse of this assumption—that the magnetic field is a result of the rotation of the earth—is another lively topic at the present time.

Halley made a magnetic survey of the Atlantic Ocean between the years 1698 and 1701, and in the latter year a chart was published showing lines of equal declination. From a study of these lines, Halley concluded that there were two magnetic poles in the Northern Hemisphere, one north of Lands End and 7 degrees from the geographic pole (83° N., 5° W.) and another north of California and 15 degrees from the pole (75° N., 120° W.). The first mentioned pole would be to the east of the northeast part of Greenland and the second just to the north of Banks Island. These poles were supposed to be moving eastwards round the geographical pole with periods of 864 and 1,728 years, respectively. The faster moving pole was assumed to be influenced by a rotation of the earth's core, while the slower moving pole was affected by the stable outer crust. Professor Hansteen of Norway continued to support Halley's original idea of two north magnetic poles until as late as 1819. Hansteen computed the positions of these poles for the epoch 1800 and found that one should be in latitude 69°.9 N., longitude 93°.6 W., while the other should be in latitude 85°.4 N., longitude 131°.7 E. The former pole would be in the Isthmus of Boothia.

The lines of equal declination or variation of the compass are shown radiating from the magnetic pole on Prince of Wales Island. Note positions assigned to the pole by Ross, Amundsen, and Spencer Jones.

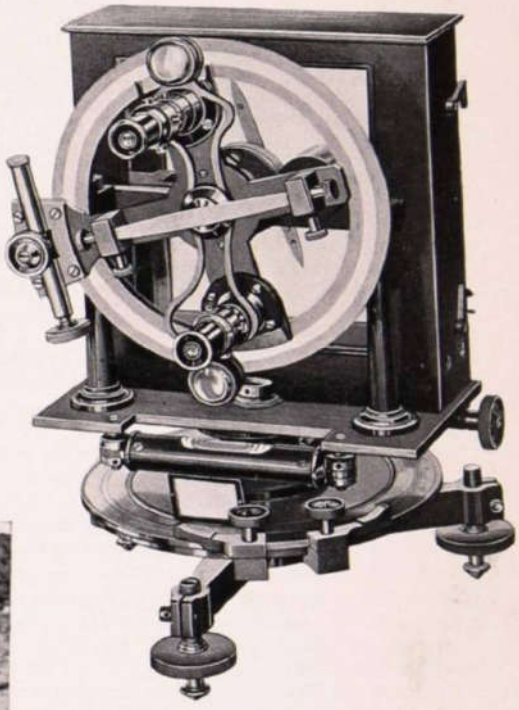


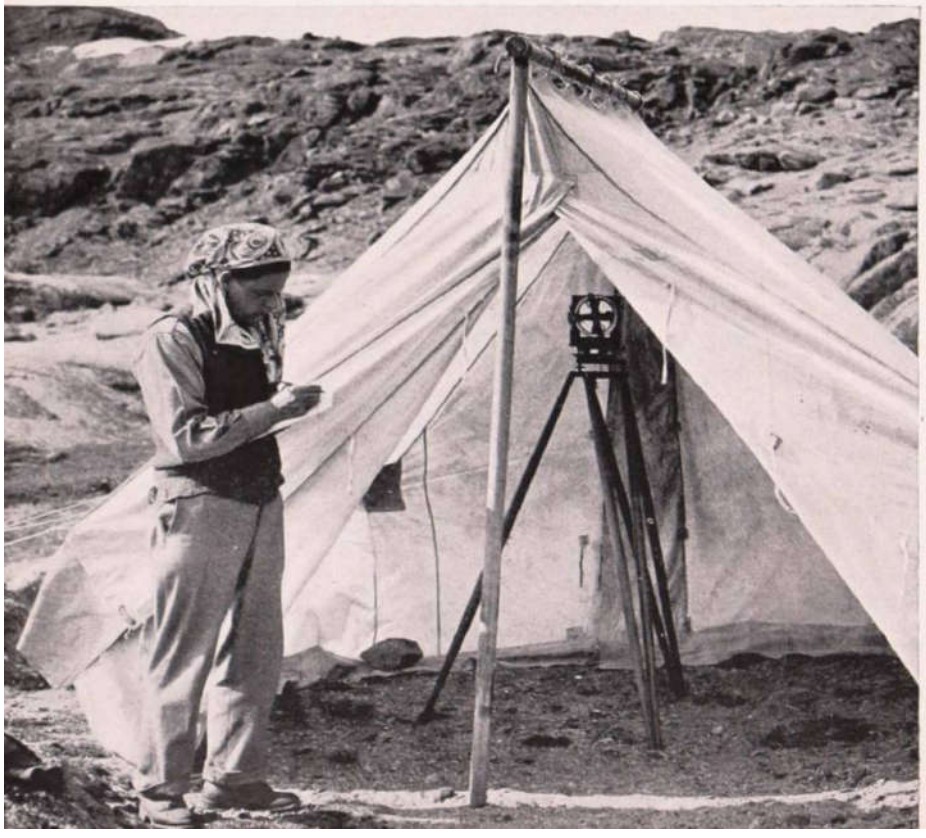
Prior to the beginning of the nineteenth century, the position of the north magnetic pole was deduced from the results of declination observations made in areas remote from its calculated location and, generally speaking, no account had been taken of the inclination and horizontal force in the various analyses. Complete magnetic observations comprising declination, dip and force, made in the Canadian Arctic between the years 1818 and 1826 by Franklin, Parry, and Sabine, indicated the presence of but one north magnetic pole, which should be situated in the vicinity of Boothia Peninsula. Further analysis of these results, coupled with those gathered by Franklin during an overland magnetic survey of Western Canada between 1819 and 1826, led Professor Barlow to construct magnetic maps indicating the magnetic pole to be on the western coast of Boothia Peninsula.

James Ross was the first actually to determine the position of the north magnetic pole by observations made on the spot or very close to it. On June 2, 1831, he measured a mean dip of 89° 59′, which was just one minute short of the 90° to be found at the pole. The spot was in north latitude 70° 5′ and west longitude 95° 46′, which agreed precisely with Professor Barlow's findings. Ross did not go beyond the spot indicated by his magnetic instruments in order to find out how large an area the pole might occupy, but the results of observations made at temporary magnetic observatories established at his winter quarters definitely supported the fact of his being in the magnetic pole area.

Amundsen was the next scientist to explore the magnetic pole area. He used more precise instruments, but his methods were akin to those of Ross. He established a magnetic observatory on King William Island which operated from November 1903 to May 1905 and furnished control to field observations made during a magnetic survey of parts of King William Island and Boothia Peninsula. The position of the magnetic pole of the epoch 1904, as evaluated from his combined operations, was latitude 70° 30′ and longitude 95° 20′. This suggested that the pole had moved about forty miles in a northeasterly direction since 1831. Whether or not the pole had moved is questionable, but the evidence supporting the pole's position in southwest Boothia Peninsula was conclusive.

Magnetic data upon which the present position of the north magnetic pole is based have been accumulating in Canada for the past 130 years. The foundation of magnetic surveys extending from southern to northern Canada was laid by such renowned explorers as Sir John Franklin, Captain Back, Sir John Richardson, and Captain J. H. Lefroy between 1826





The author measures the dip or inclination, and also the intensity, of the Earth's magnetic field, Lake Harbour, 1934. Above: an enlarged drawing of the dip circle— the instrument on his tripod — with which these measurements are made.

and 1846. The Topographical Survey of Canada began systematic magnetic surveys in 1880 and since then has accumulated a tremendous amount of data.

Systematic scientific surveys in Canada, designed to gather precise values of all the magnetic elements required for research into the theory of the cause and effects of the earth's magnetic field, were begun in 1905 by the Carnegie Institution of Washington. These surveys of isolated districts of Canada were continued at irregular intervals during the succeeding twenty years. The Canadian government decided also that such scientific magnetic surveys were of prime importance to Canada. The Dominion Observatory, therefore, was instructed to organize a magnetic survey of Canada to gather precise measurements of all magnetic elements which could be used for research purposes as well as for practical applications. The Division of Terrestrial Magnetism of the Observatory commenced its duties in 1907.

The Dominion Observatory instituted its search for the north magnetic pole in 1922 when it began extending its systematic Dominion-wide survey towards the Arctic. Its objective was not merely to reach the magnetic pole, but to cover the entire Canadian Arctic with a network of base magnetic stations to secure information required for the construction of magnetic maps. In the prosecution of this survey the north magnetic pole area would eventually become surrounded by magnetic stations and thus enable the pole centre to be determined. It was essential that the position of the pole should be accurately known, for without this knowledge reliable charts for air navigation and other purposes in the Canadian Arctic could not be constructed. It is of interest to note that invaluable information relative to geology and accompanying mineralized areas may be deduced from the same charts.

There is little use in trying to locate the position of the magnetic pole from the results obtained at a few scattered stations, or at a station too close to the pole. The magnetic pole is not a fixed point, nor does it remain long in one position. Daily changes occurring in the Earth's weak horizontal field in polar areas give rise to an erratic movement of the pole, with the result that it may be anywhere within an area of about fifty miles in diameter at any given instant of time. The diameter of the area is greatly increased during times of large magnetic disturbances. At stations on the fringe of the pole area, changes in declination during the day of eighty degrees have been recorded. The position of the magnetic pole refers to a point which represents the centre of its area of movement for a particular epoch. It is obvious that there must be a well distributed network of magnetic stations in the Canadian Arctic surrounding the pole area, with a denser distribution of stations in the immediate vicinity of the pole itself, in order to determine its position and movements.

In 1922 the Dominion Observatory extended its magnetic survey to Great Slave Lake by way of the Peace, and to Nueltin Lake by way of Reindeer Lake. Aklavik was reached in 1923, as well as Southern Indian Lake, Seal River, Churchill and York Factory. The season of 1924 was devoted to surveys in the Yukon and that of 1925 down the coast of Labrador. Stations were established along the coasts of Hudson Strait in 1928. In 1934 the survey was carried north of Hudson Strait to Baffin, Devon, and Ellesmere Islands. Chesterfield, Baker Lake and Repulse Bay were reached in 1937. Coppermine and Cambridge Bay were added to the network in 1945. Denmark Bay, Victoria Island, as well as Arctic Bay and Fort Ross, were reached in 1946. During the season of 1947 stations were established on northeast Victoria, north and south Prince of Wales, and King William Islands, as well as eastern Boothia Peninsula, northwest and south Ellesmere, northeast Somerset, and on the south coasts of Cornwallis and Bathurst Islands. In 1948 stations were established on north and west Victoria, north and south Banks, central Melville, and western Bathurst Islands and at Pasley Bay on west Boothia Peninsula. The observatory enlisted the co-operation of the Geodetic and Topographical Surveys in 1943, whereby declination values only have been measured at map control astronomical positions to as far north as the vicinity of Pond Inlet. The declination values supplied by these surveys, as well as by the Hydrographic Survey in sub-Arctic regions, have been invaluable in the construction of magnetic maps of Arctic Canada.

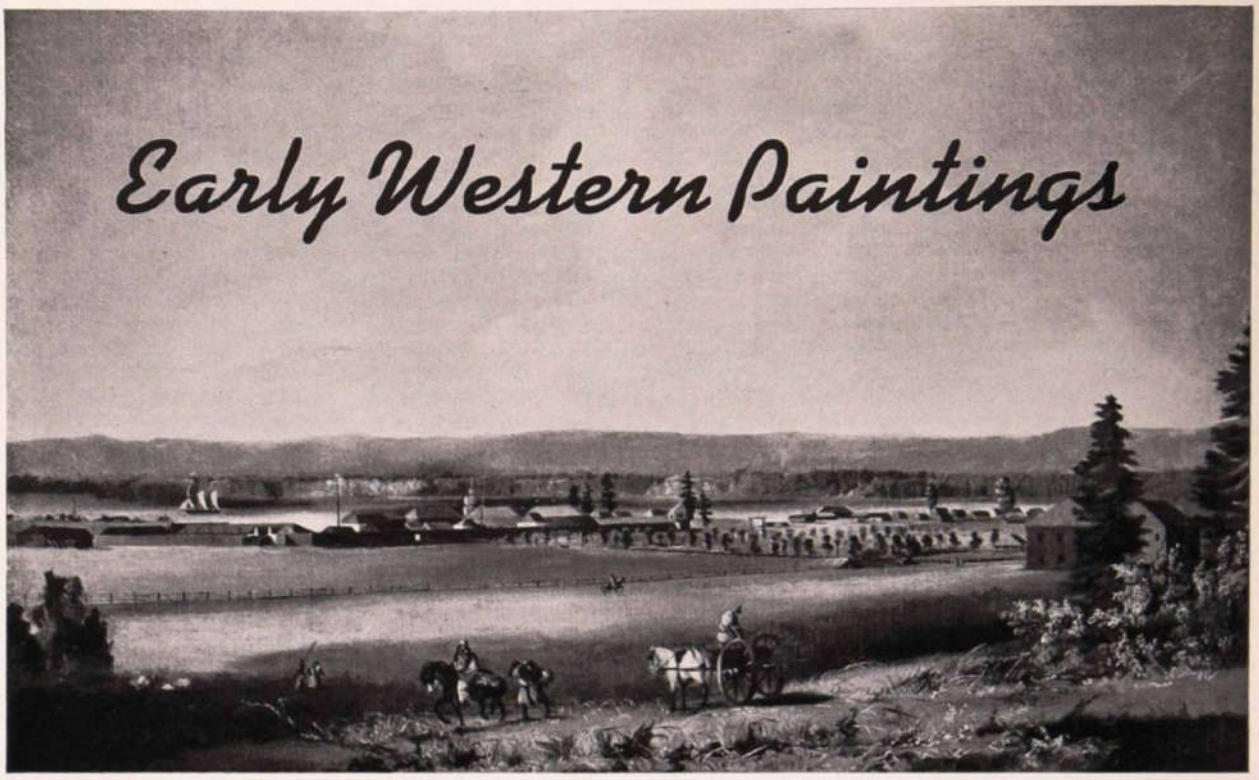
Since the beginning of the 1943 field season, there have been 388 stations occupied in Canada north of latitude 60°. Of these, 313 represent stations at which declination only has been measured, while at 75 measurements have been made of declination, dip, and force. Repeat observations were made at fourteen stations in order to secure secular or long continued change data. The observing period was approximately twenty-four hours at stations in the Arctic Archipelago so that changes in the direction and force of the earth's magnetic field throughout the day might be studied.

As the standard types of magnetic instruments either will not operate or do not give reliable values in that part of the Arctic Archipelago adjacent to the north magnetic pole area, magnetic measurements there were made by Dominion Observatory officers with new types of electrical magnetometers specially designed for this work and constructed at the observatory. These instruments were used in the 1947 and 1948 seasons and operated with precision at stations where the standard types of magnetometers were useless. Without their use, observations at twelve stations radiating fifty to two hundred miles from the magnetic pole would not have been reliable.

The magnetic survey of Canada will be continued until all parts of the Canadian Arctic have been reached. Certain selected stations will be re-occupied at intervals to provide evidence of any shift in position of the magnetic pole in future years. The daily movements of the pole, whether due to normal or disturbed conditions existing in the magnetic field, will be studied from continuous recordings at two magnetic observatories recently established in Arctic regions by the observatory, one being at Baker Lake and the other at Resolute Bay, which is about 150 miles northeast from the magnetic pole.

So runs the story of the Dominion Observatory's search for the north magnetic pole. But the account does not end here. It is of great importance for us to know whether the pole has travelled a distance of two hundred miles from Boothia Peninsula to Prince of Wales Island at an average rate of about five miles each year or has moved in an erratic fashion, and the best indication of this is likely to be found in its behaviour in the future. Time and precise observations by Dominion Observatory scientists will tell the rest of the story.

Early Western Paintings



This oil of Fort Vancouver in its heyday was painted by an artist who cannot now be identified. The original in the Coe Collection is one foot four inches by two feet.

The Coe Collection, recently given to Yale University, contains a group of six western paintings, the origin of which is a mystery.

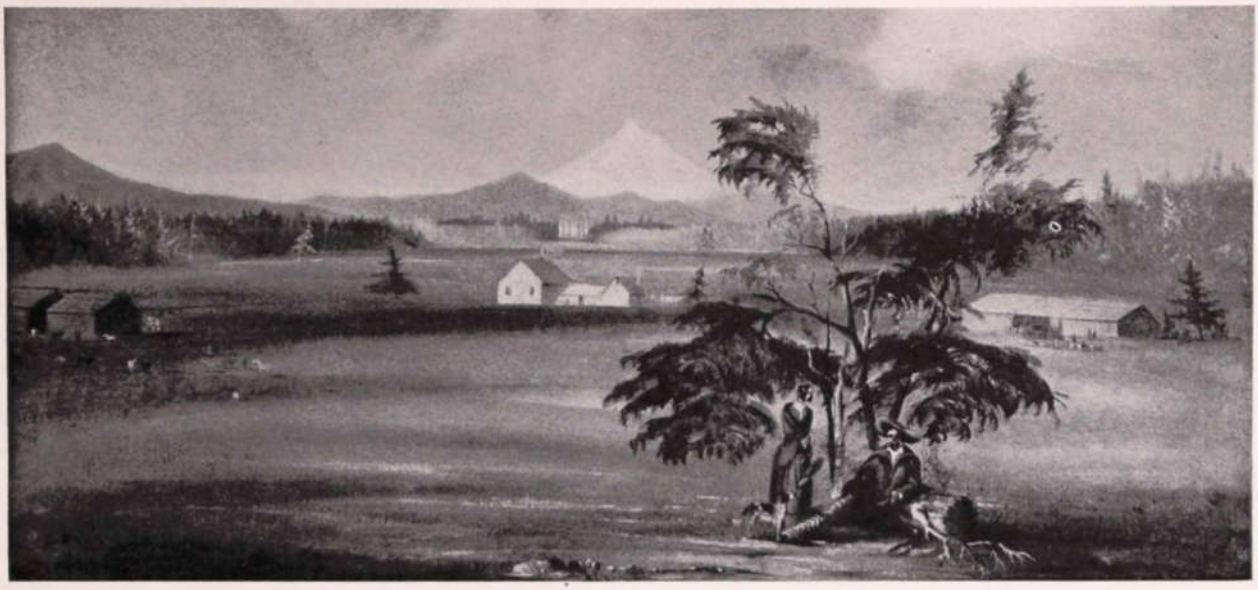
THE William Robertson Coe collection of western Americana, which was recently presented to Yale University, has been described by a leading authority as "the finest collection of western material in existence, and the finest undoubtedly that will ever be formed." Among its 7000-odd items—including books, documents, letters, journals, pamphlets, and pictures—are six oil paintings, which the *Yale University Library Gazette* of October 1948 referred to as follows:

"Another overland journey to Oregon in 1841 was made by Sir George Simpson, of the Hudson's Bay Company. With him was a first rate artist who painted a series of six magnificent oils of the scenes en route to and in Oregon."

As the *Beaver* had never heard of an artist accompanying Sir George in this part of his journey round the world, more particulars of these paintings were requested, and the Yale Librarian, James T. Babb, kindly sent us descriptions of them. Following these descriptions was a catalogue note: "Historical paintings of this quality are among the *rarissimo* of Western Americana. The present series has long been esteemed by connoisseurs of art and by informed antiquarians as one of the important corner-stones of the Coe Collection." The six paintings are entitled: Fort Vancouver; Mount Hood from the East; Falls on the Pelouse, Snake River; Falls on the Willamette; Buffalo Hunt; and Buffalo Resting.

Mr. Babb also had the first five paintings photographed for us. On receipt of the prints, one, the Buffalo Hunt, was at once recognized as a Paul Kane, or a copy of it. The prints were then sent to Kenneth Kidd, of the Royal Ontario Museum, who is an authority on Kane, and to the National Gallery of Canada for their comments. Mr. Kidd found that three of them were exact duplicates of original paintings by Kane owned by the Royal Ontario, and titled "Pelouse Fall," "Kakkabakka Falls," and "Half Breeds Running Buffalo." The second one, it will be noticed, corresponds to the painting entitled "Falls on the Willamette" in the Coe collection. The latter falls, however, at the time Kane visited them, were surrounded by the settlement of Oregon City, and were only about thirty-five feet high, whereas the picture shows falls about three times as high in the midst of a wilderness. A comparison of this painting with old pictures of Kakabeka Falls near Fort William, Ontario, shows considerable similarity.

No duplicates of the other pictures that were photographed are found in the Royal Ontario collection, or in that of the National Gallery. Indeed, judging only from the photos, Mr. Kidd believes that they were done by a different hand to the other three. R. H. Hubbard, curator of Canadian art at the National Gallery in Ottawa, independently expressed the same opinion, and suggested the possibility of their being done by, or after, Lt. Warre of Oregon fame. "Something in the mountain and the delicate contours of the foothills," he added, "suggest this painter."

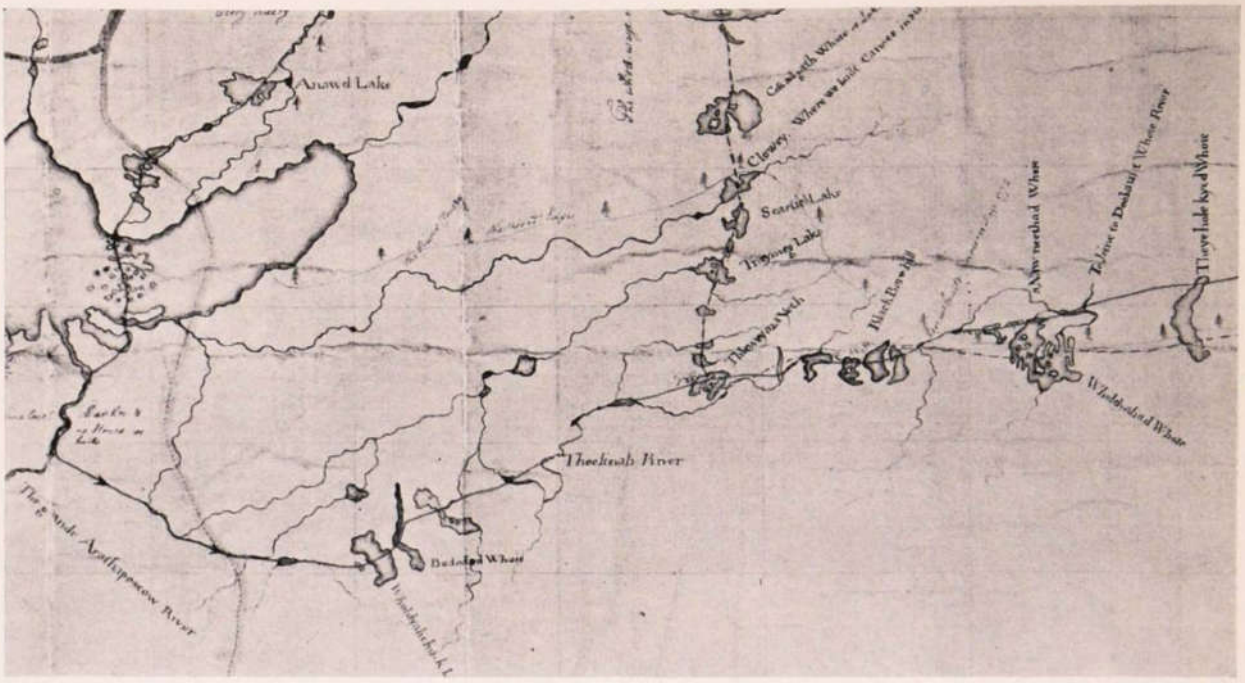


"Mount Hood from the East" is the title of this oil, which appears to have been painted by the artist of the Fort Vancouver picture.

It is reasonable to suppose, at any rate, that the three others were done by Kane. In Mr. Kidd's article, "The Wanderings of Kane," in the December 1946 *Beaver*, he remarks that Sir George Simpson commissioned the painter to do a group of pictures for him. But "virtually nothing," he adds, "is now known of this set of pictures, and all trace of them is lost. It is possible . . . that some or all of them may in time come to light."

It is now suggested that some of them *have* come to light, because the six paintings were acquired for the Coe collection from the widow of Sir George Simpson's grandson. Which of Sir George's grandsons was the owner of them has not yet been determined.

This picture, which in the Coe Collection was labelled "Falls on the Willamette," is identical with Paul Kane's "Kakkabakka Falls." The latter is probably the correct title.



Part of Hearne's original map in the archives of the Hudson's Bay Company, showing his outgoing (dotted) and incoming routes of 1771 and 1772 crossing at Thleweyaza Yeth Lake. Note the tree line, shown by widely spaced evergreens. The two rivers north of the Theelinah are probably the Taltson and the Snowdrift.

New Light on Hearne

by J. Tuzo Wilson

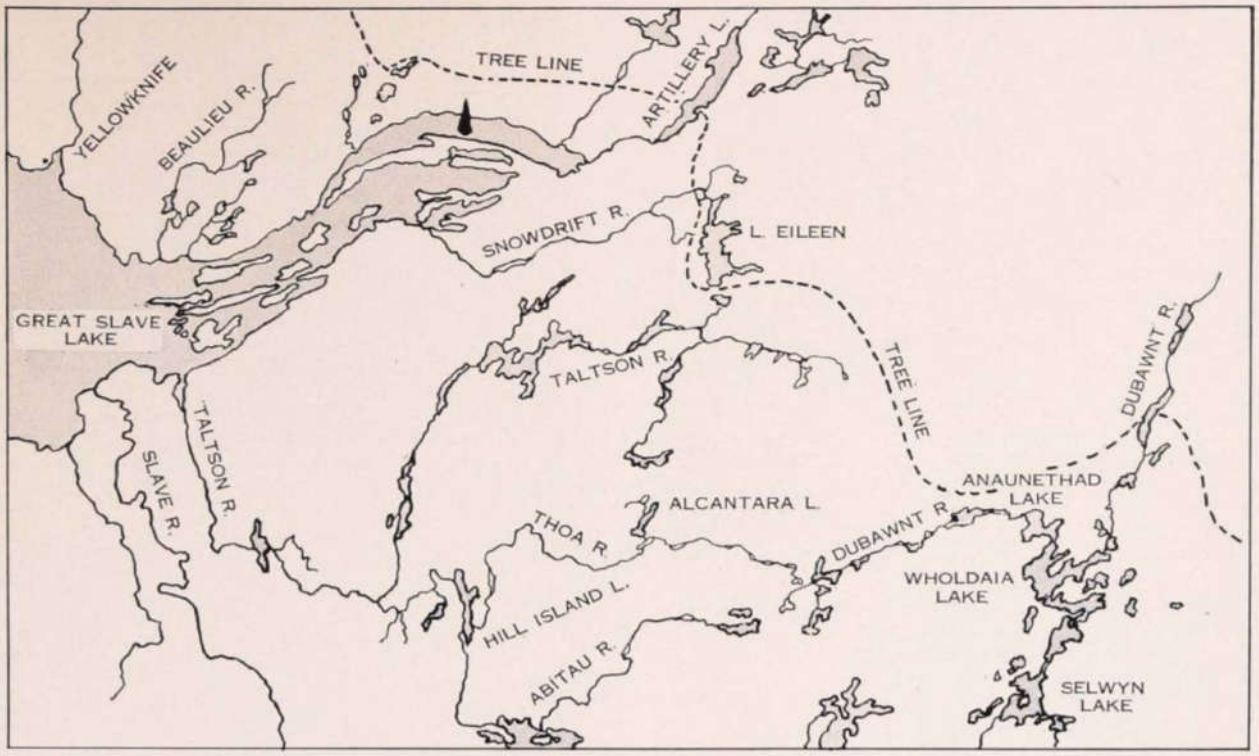
THE publication by the *Beaver* of a description of the James F. Bell collection and of a copy of Hearne's manuscript map of the Coppermine River, which it includes, has prompted the writer to put together these notes upon certain other unpublished data concerning that remarkable traveller. Appropriately enough, credit for the more important disclosures belongs to Mr. R. H. G. Leveson-Gower, the former archivist of the Hudson's Bay Company in London.

I should state immediately that my interest in Hearne dates from boyhood, when I read a copy of his narrative. It is a lively adventure story, such as might appeal to anyone, but I had almost forgotten it until 1938 when I was asked by the Geological Survey of Canada to map an area lying northeast of Fort Smith, N.W.T. Realizing that Hearne had passed through that area, I took with me a copy of the relevant parts of his narrative and was delighted to find that several lakes and rivers in the area exactly fitted the description given in the text by Hearne, although little could be made of his map of those parts.

The key to locating these features was Camsell's identification of Hill Island Lake as described in Memoir 84 of the Geological Survey of Canada. Using that as a start and working west and in reverse along Hearne's return route, his Bedodid and Large Pike Lakes were identified with unnamed lakes in the southeast quarter of the Fort Smith sheet of the National Topographical Series. Bedodid is a long narrow lake extending north-northeast, while Large Pike is the more easterly of two large lakes at the foot of the sheet. They and the connections between them fit precisely Hearne's description. Furthermore, we found that the portages which he must have crossed with the Indians in March 1772 are still kept open today by native and white trappers. Like Hearne, they travel them chiefly in winter. Thus by assisting in the location of adjacent features, Camsell's identification of Hill Island Lake is even more fully confirmed as being itself correct.

With this start, it was obvious that the attempt should be made to trace Hearne's route further to the east to Thleweyaza Yeth, the lake which was the junction of his outward and return journeys. It is the most important point on his travels remaining to be identified. Efforts to that end, however, were entirely stopped because the published narrative omits all mention of the route followed during the three weeks after crossing Hill Island Lake. The map published in Hearne's work is again difficult to understand.

Some guidance about the maps of Hearne's journey was obtained from the Champlain Society's edition of his journey, which was edited by Dr. J. B. Tyrrell and is the chief source of information about Hearne. In it are reprinted those parts of maps by Cook and Pennant which show Hearne's own work. This led to examination of as many of the six or eight editions of



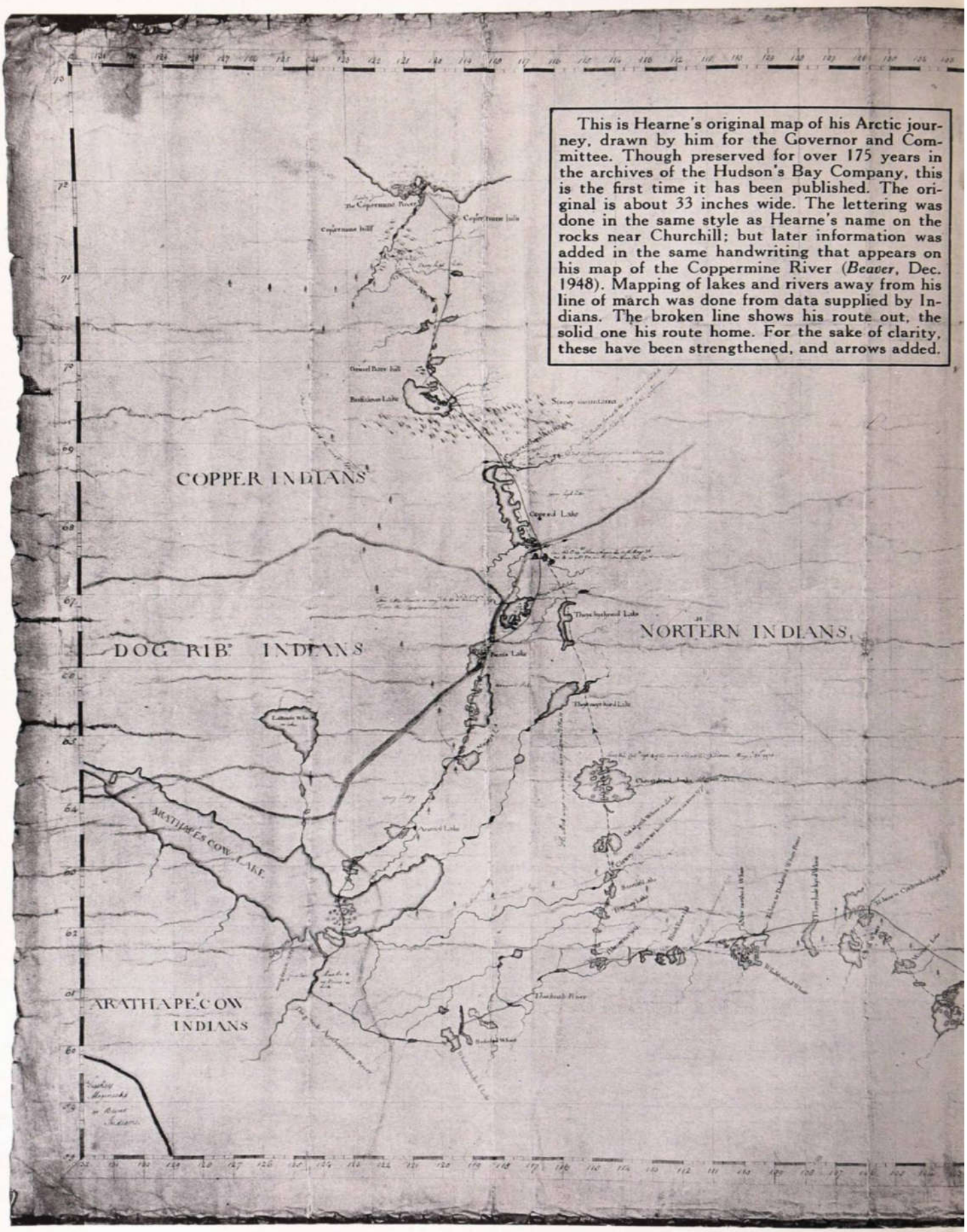
Modern map showing some of the chief waterways in the country southeast of Great Slave Lake. Thoa River is probably Hearne's Theelinah. Hill Island is the lake just east of Hearne's Bedodid Whoie (Lake). The author believes Hearne's Thleweyaza Yeth to be Alcantara Lake.

Hearne's book as could be found and of many other contemporary maps which showed his route. All the versions fall into two quite distinct and different classes, which I shall call the "M" and the "P" classes. These letters stand for Manuscript and Publication respectively because there is reason to believe that they are all copied with slight variations either from Hearne's original manuscript or from the quite different map which was later published in 1795 in the first edition of his *Journey from Prince of Wales's Fort, in Hudson's Bay, to the Northern Ocean.*

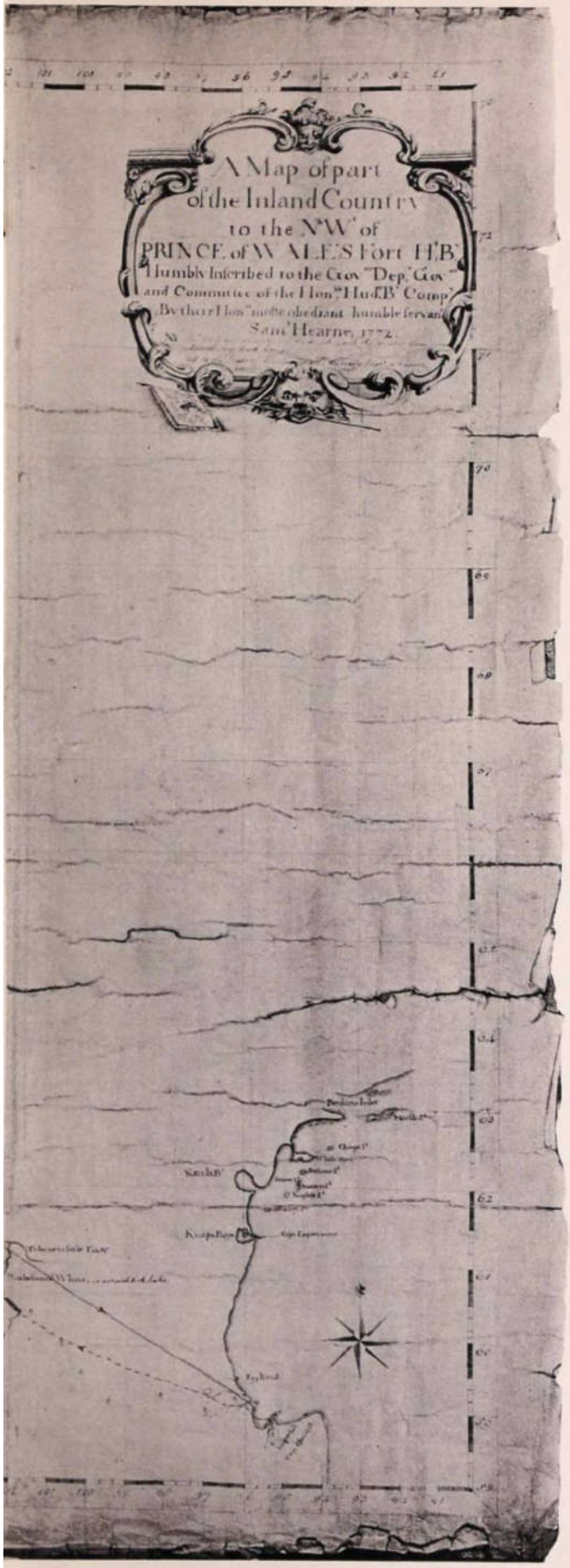
The M versions include all those drawn between 1772 and 1795 and reproduced by contemporary explorers, writers and cartographers, including Cook, Meares, Mackenzie, Pennant, Roberts and Arrowsmith. The P versions, on the other hand, include those in all editions of Hearne's book published in various languages from 1795 on. The P versions are garbled, fanciful and much inferior to any of the M versions. This explains the drop in Hearne's reputation which took place shortly after his book was posthumously published and the difficulties which subsequent explorers like Franklin have had in finding exactly where Hearne went. The main differences are these. The M versions, though they differ from one another considerably in spelling and detail, are in general alike and are all reasonable maps. The P versions show less variations but are none of them so reasonable as maps. Few of the lakes are connected to streams that lead anywhere. Those rivers which are shown bifurcate and rejoin in an unnatural and bewildering manner. The map seems to be made deliberately to confuse, and nothing but the broadest features of Hearne's route can be surely ascertained. On the other hand, any of the M versions can be fitted fairly well to the modern maps made with the aid of air photographs. For example, Alcantara Lake on the present Hill Island Lake sheet fits very well with Thleweyaza Yeth Lake as shown by Cook or Pennant.

These ideas suggested that further search should be made to see if Hearne's original manuscript map could not be found and with it the original of his journal. It is true that Tyrrell had unsuccessfully sought these before 1911, but much cataloguing has been done since then. During the war the Hudson's Bay archives were closed, but in September 1948 I had the good fortune to be able to call upon Mr. R. H. G. Leveson-Gower in London. He was able to produce immediately the original manuscript of Hearne's map signed and dated in 1772. It had only been properly catalogued within the past few years. A brief examination of it showed that it was indeed of the M class and much superior to the P version subsequently printed in Hearne's book. It was good to find that so important a document of the exploration of northern Canada still survived in excellent condition. Mr. Leveson-Gower was also kind enough to point out that another copy of Hearne's map had recently been sold as part of the Harmsworth collection. Through the good offices of Mr. Frank Maggs, the writer was fortunate in being able to procure this and the main part of it is shown here.

A statement on the back, which explains its origin, reads as follows: "This was copied from the Admiralty copy [by] Sir J. Richardson the Arctic Explorer in 1836. It was sold with other charts and books to B. Halliday of Leicester by the family of Sir J. R. and purchased from him by R. L. H. February 1924. The



This is Hearne's original map of his Arctic journey, drawn by him for the Governor and Committee. Though preserved for over 175 years in the archives of the Hudson's Bay Company, this is the first time it has been published. The original is about 33 inches wide. The lettering was done in the same style as Hearne's name on the rocks near Churchill; but later information was added in the same handwriting that appears on his map of the Coppermine River (*Beaver*, Dec. 1948). Mapping of lakes and rivers away from his line of march was done from data supplied by Indians. The broken line shows his route out, the solid one his route home. For the sake of clarity, these have been strengthened, and arrows added.


A Map of part
of the Inland Country
to the N.W. of
PRINCE of W A L E S Fort H.B.
Humbly Inscribed to the Gov. Dep. Gov.
and Committee of the Hon.ble Hud.B. Comp.
By their Hon.ble most obedient humble servant
Sam.l Hearne, 1772.

notes etc. on the map are by Sir J. R." On the face of the map is a statement giving more details. "Copied by Henry Hanwell 1778 from Hearne's chart and recopied at the Admiralty on parchment. This copy was made from the latter in 1836."

It is easy to understand how Sir John Richardson came to make this copy, for 1836 was the year in which Captain George Back published his well known *Narrative of the Arctic Land Expedition to the mouth of the Great Fish River*. In it chapter V is a "Digression concerning Hearne's route" written by Dr. Richardson. Without doubt he made this map when collecting material for that chapter.

Preliminary enquiries at the Admiralty and Public Records offices for the chart which Richardson had copied did not discover it, nor had the Hudson's Bay Company any record of Hearne's original journal. May they both be found!

The mystery of how the peculiar differences between the M and the P versions of Hearne's map arose is not easy to explain, but Richardson makes a suggestion about why some sections of the narrative are missing.

He states in the chapter already referred to "that Dalrymple was induced closely to examine the courses and distances recorded in Hearne's Journal, whereby he discovered so great a discrepancy between the outward and homeward journeys as caused him to reject the higher latitudes altogether, or greatly reduce them, and in doing so he was undoubtedly right, though Hearne complains bitterly in his preface of the injustice done to him." Further on, Richardson states that this attack led Hearne to omit parts of his narrative. Richardson's words are: "His printed work does not, however, quote his courses and distances so fully as his original journal (a copy of which we saw at Hudson's Bay), the animadversions of Dalrymple having apparently caused him to leave several important gaps in the enumerations of his daily journies both outward and homeward." Thus did Richardson imply that Hearne had sought literally to cover his tracks.

The Dalrymple referred to was at that time hydrographer to the admiralty and still in high hopes of finding a navigable northwest passage. It must be remembered that Vancouver had not yet explored the inlets of the British Columbia coast and that many writers had suggested that some of these led far into the continent and even right across it. Other writers like Dobbs held that a proper examination of inlets along the Hudson Bay coast would disclose the other end of straits leading across what we now know to be the prairies. Hearne's journey on foot from Churchill to Coppermine in latitude 68° N., which he exaggerated to latitude 72° N., of course dashed these hopes. At least it would if Hearne's story was shown to be correct, but his story was uncorroborated and Dalrymple detected internal inconsistencies. Naturally he attacked Hearne, but he did so in part unjustly for he lumped Great Slave Lake and Lake Athabasca together, calling them both Arathapeskow Lake, and thus exaggerating Hearne's errors in latitude.

It has generally been inferred that his attack on Hearne is the one contained in a rare pamphlet, entitled "Plan for Promoting the Fur-Trade and Securing it to this Country by Uniting the Operations of the East-India and Hudson's Bay Companys." In this, fictitious Spanish claims for sailing far into the continent and other vague reports from Indians are

weighed against Hearne's account in order to cast doubt upon Hearne's observations and to show the possibility of yet finding a navigable route across the continent.

Hearne was so much incensed by Dalrymple's attack that he devoted most of the preface of his narrative to a refutation of the charges. The first words in the preface, and indeed in the book, are these: "Mr. Dalrymple, in one of his pamphlets relating to Hudson's Bay, has been so very particular in his observations on my journey as to remark that I have not explained the construction of the Quadrant which I had the misfortune to break in my second journey to the north." This precise statement makes it clear that Dalrymple wrote more than one pamphlet about the subject and that the attack which Hearne most resented was not that which had been supposed, but some other.

Search in the catalogue of the British Museum suggested that it was probably an even rarer pamphlet, entitled "Memoir of a Map of the Lands around the North-Pole," which was also published by Dalrymple in 1789. The British Columbia Provincial Library were kind enough to provide a photostat of their copy, which is indeed the missing pamphlet. It contains a fuller dissection of Hearne's travels and precisely those details about the quadrant and so on which Hearne tried to answer in his preface. The map contained in this work shows Peter Pond's Athabaska Lake and Hearne's Great Slave Lake as one and the same, and the text states that "Mr. Hearne's map and the Canadian map differ very much concerning the form and extent, as well as the position, of the Arathapeskow Lake." From what we now know, this statement is hardly surprising.

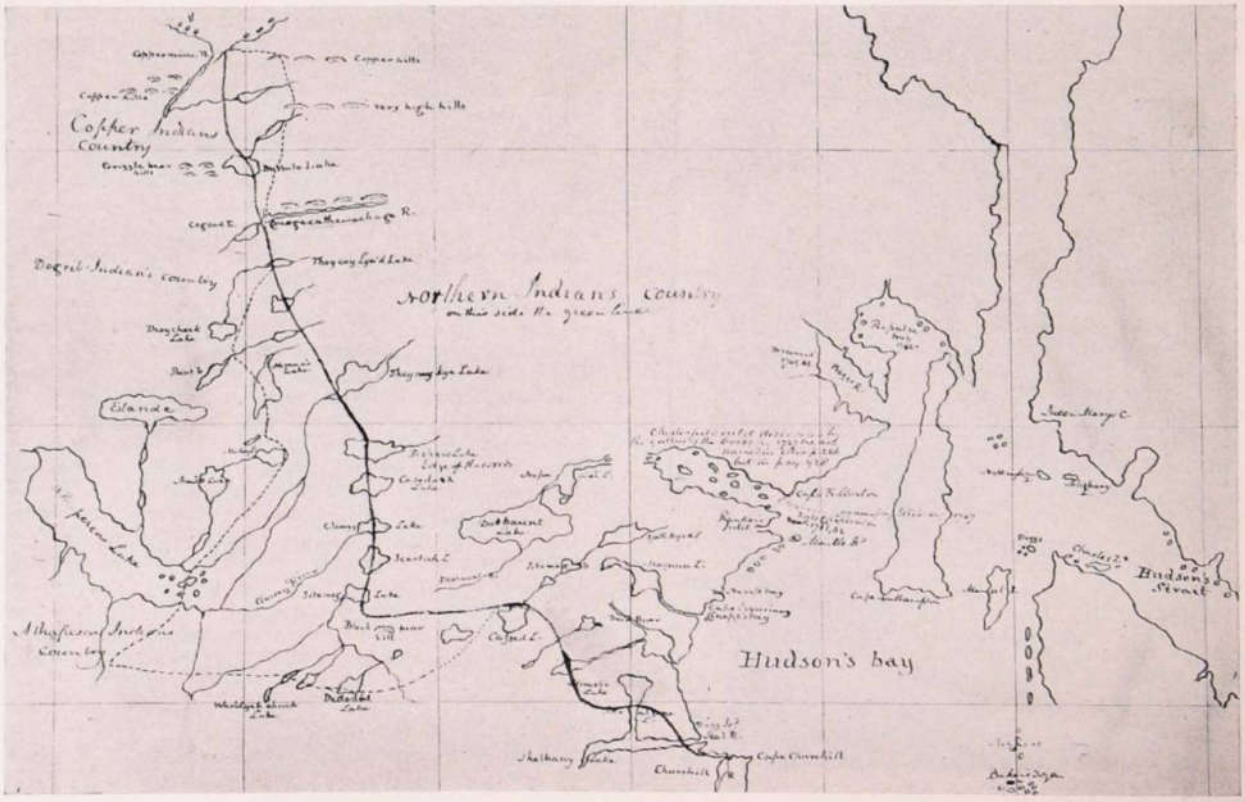
We can thus realize that in his later years, when engaged in preparing his narrative for publication, Hearne was under vigorous attack, in part justified for he had undoubtedly exaggerated his distances, but in part unwarranted and due to Dalrymple's confusion of the two great lakes.

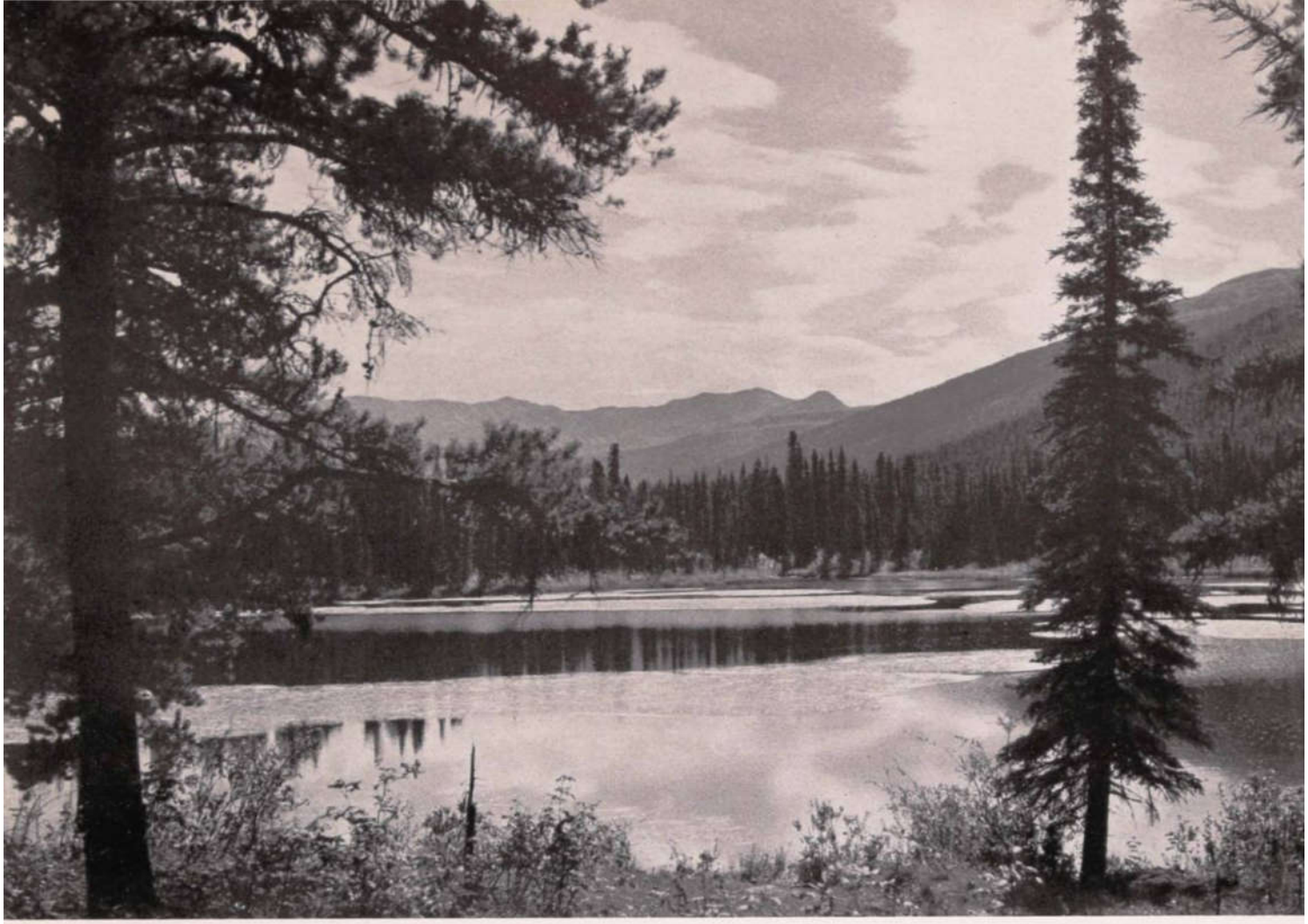
Hearne had no knowledge of the second lake, but he must have realized that the criticism was too harsh, and Richardson has suggested that he took refuge in deliberately omitting parts of his narrative so that he could not again be accused on the basis of internal evidence. It seems only logical to suppose, if this was the case, that he also deliberately confused his map, but I dislike extending the accusation and wish that I could find some grounds for blaming a draughtsman or the editor. If he did do it himself, he can perhaps be excused on the grounds that he was in poor health and attacked by a formidable opponent with less than justice.

In conclusion we can be sure, however the errors occurred, that they were introduced as later additions and that the original map and manuscript were more accurate descriptions of the country and of the route than was the book printed after his death.

Hearne was the first white man to see the Arctic coast of North America. He discovered Great Slave Lake and the Mackenzie River system. For more than a century after him, none explored the barren ground, while his journeys there were so arduous that no one has ever repeated them. He left a delightful and true account of the country and the people as he saw them. Let us hope that a copy of his original account may yet be found, as his map has been, and that the contributions to Canadian geography of this assiduous and valiant fur trader will be cleared of all confusion and error. Although 177 years have now passed since his successful return to Churchill, it does not seem too late for Samuel Hearne to achieve that greater glory to which his exploits entitle him.

Part of the Hanwell-Richardson map referred to in the text. In the process of being copied three times the routes, and the shapes and positions of the lakes have become greatly distorted. Compare the position of Black Bear Hill in relation to Bedodid Lake, as shown on this map and on Hearne's original, and note the differences in the junctions of the two routes.





Scenic beauty along the Alaska Highway is typified by this roadside view across a small lake at Rancheria. A. Leitch.

Royal Road to the Yukon

by Adelaide Leitch

THERE is no royal road to the Yukon," said an editorial in the *Klondike News* of 1898. "If you can't cross Old Chilkoot with a pack on your back, you are not fit to go into that country. If the White Horse Rapids scare you now, they will send you into spasms when you face them. If you expect to take cabin passage all the way and live in Dawson without doing a deal of hard work, you will probably get gloriously left. . . . But, once in the country, you will find there is a place where all men are equal. . . ."

Today there *is* a royal road to the Yukon, a wide, gravelled, all-weather road snaking north. Over the Alaska Highway both visitors and settlers are being lured into the Yukon, where men still are equal and no one puts a lock on his door.

The road moves through some of the most fantastically beautiful scenery Canada has to offer—meadows of flaming fireweed, valleys of dark, lush evergreens, with the small pointed tamaracks a thousand feet below the edge of the highway, mountains with low-hanging clouds fringing their bald tops. The highway clings to the side of the mountain, apparently with sheer will power, and gains altitude so quickly that the traveller often experiences the same buzzing in his ears that he does in a plane. It winds along Muncho Lake, ringed with its lavender mountains, climbs to its highest point, 4,256 feet above sea level at Summit's green lake, goes on over sturdy bridges, past small Hudson's Bay Company stores, repeater stations, maintenance camps and hot springs.

Along the roadside, wild raspberries grow as big as a man's thumb, and are protected by a bodyguard of black flies all thirsting for blood.

Occasionally a black bear bolts into the bush (although the wild animals have retreated from the travelled highway) or perhaps a rider leading his pack horses crosses the road. At Watson Lake, a wilderness sign post gives directions to Tokyo, Nome, New Zealand and Toronto—and about fifty other places throughout the world.

The opening of the Alaska Highway for general use in the spring of 1948 coincided with a double golden anniversary for the Yukon. Fifty years ago, the Yukon Act made of it a separate territory, and the same year the Klondike Gold Rush of '98 brought the greatest influx the Yukon has ever seen. Yukon eyes are turning on the highway now, as another influx—slower than the first—has started.

Permits are no longer needed to travel between Mile 0.0, Dawson Creek, British Columbia, and Mile 1523, Fairbanks, Alaska, and regular bus service is maintained all the year round. Maintenance camps keep it in excellent condition, and it is connected by long distance telephone and telegraph with almost every city in Canada and United States.

Gas stations, overnight stops, meal stations are far apart, but lists are available for anyone travelling the Alaska Highway; meals are excellent and of the home-cooked variety, often served at trestle tables; the accommodation is clean and everything much more reasonably priced than Dame Rumour would have one believe.

The northwest shows a curious blending of the old and the modern. Indians still dry their meat on outdoor racks along the highway in the manner of their ancestors before them—but whole families ride the highway busses along with the svelte tourists from Seattle, the northland padres, and the Alaskan citizens. Indian fish wheels turn in the swift current of the Yukon River, and poling boats are pushed laboriously up-stream, but, around the next bend of the river, an Indian brave zooms along in his out-board motor boat.

The hypnotic charm of the Yukon that lured men into the country and kept them there fifty years ago still hangs over Dawson City, 460 miles by paddle steamer from Whitehorse. There is a saying that, if you stay one year in the Yukon, see the autumn ice form and the spring ice break up, you never again leave the country for good. It is a fact that men do return to the Yukon after two, ten or fifteen years.

Out on the Klondike streams, the prospector with his gold pan has been replaced by the gold dredges, working their way over the river beds for the second time and moving about fifty feet a day. They screech and scream like souls in agony, and now and then toss up a fragment of fossil ivory from prehistoric mastodons—which is later transformed into ivory jewellery in a Yukon shop.

On the veranda of St. Mary's Hospital in Dawson, old men rock gently to and fro in the sun, staring with dreamy eyes out over the Yukon River—pioneers of the Gold Rush of '98 reliving their memories.

The Nugget Dance Hall, where Diamond Tooth Gertie started her career, stands abandoned on the main street, peopled only with ghosts of yesterday. Cobwebs stretch over the back-stage pulleys and the three tiers of seats, where prices increased with the

A winter view of the Highway winding past lakes and through forests towards the distant mountains. **N. B. Hendricks.**

increase in height—and privacy. Alex Adams, who used to dance on the fabulous stage when gold nuggets rained down from the balconies, is the only man with a key to the old hall now.

"You ever start to pan for gold," Alex will tell you, "and pretty soon you start to dig like a gopher with a pup behind him!" Even yet, they say, you can pan gold from the dust of Dawson streets.

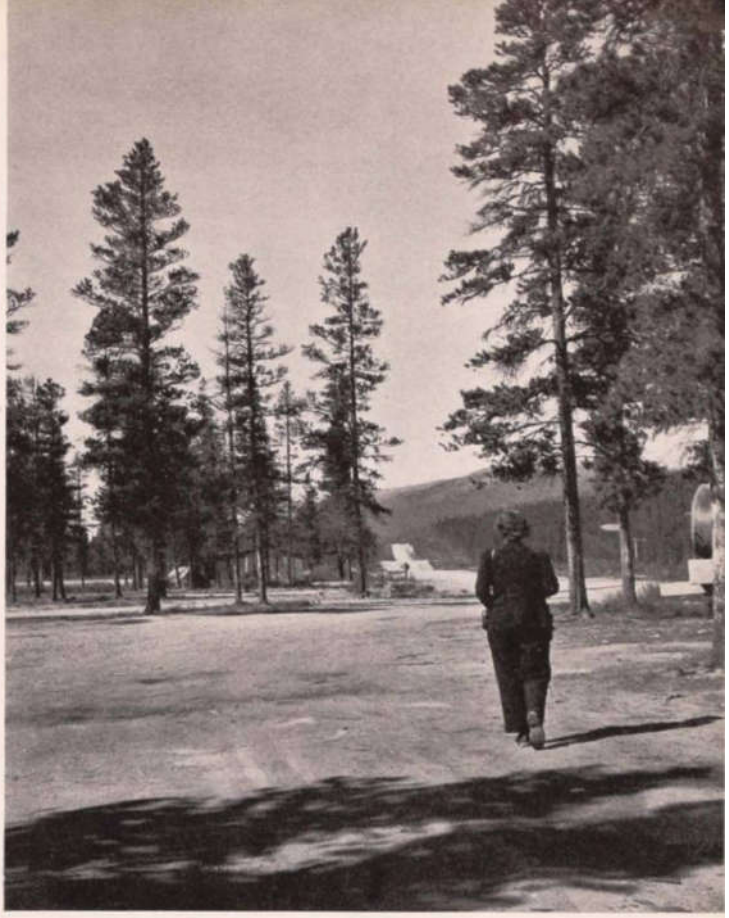
The old-timers always march in the Discovery Day parade of August 17, but, each year, their numbers diminish. Hotel accommodation was at a premium in Dawson and Whitehorse this year, as miners came in from creeks miles away.

Traces of the tortuous Trail of '98 from Skagway are still visible from coaches of the ten million dollar railway that now travels the 110 miles to Whitehorse and crosses Alaska, British Columbia and the Yukon on the way. The paths packed down by feet of men and animals that lost their lives in the stampede are still to be seen winding between towering hills, and even the train seems hard put to force its way through. Often, one trestle rests on solid ground while the other is on a built-up support as it jack-knifes through the valleys, along beautiful Bennett Lake with its tiny pioneer church, past Carcross, where the first locomotive of the Yukon is in honourable retirement, and over the international boundary 2,900 feet up at the summit of the White Pass.

The north holds tremendous fascination for cheechakoes and sourdoughs alike. Gardens bloom riotously there, once the summer growing season starts. With the sun above the horizon nearly twenty-four hours a day, pansies are often three inches across, and cabbages can't be encircled with the arms. On the wooded slopes—sometimes even above the timber line—grow 500 varieties of wild flowers and ferns, as well as the wild raspberries and mountain blueberries.

In winter, as if to atone for the 40-below temperatures, the Yukon provides a natural "deep freezer" for the housewife right outside her cabin door. As soon as the freeze-up comes, she can do her whole winter's baking, if she has a mind to, pop her loaves of bread and her mince pies outdoors, and serve them as freshly baked several months later.

There is still an atmosphere of the helping hand in the Yukon, only a little less noticeable than in Klondike days when a prospector would go up the creeks,



The Alaska Highway runs beside a number of wayside clearings and camping sites such as this. A. Leitch.

tacking a notice on his cabin door—"Help yourself, but for God's sake don't take way the cabin!"

Commissioner J. E. Gibben, K.C., of the Yukon, believes that the future of the country is bright. With 207,076 square miles within its borders, it supports only 7,000 to 8,000 people, most of them trappers, mining personnel and Indians. The capital city of Dawson has shrunk from its 25,000 of gold rush days to just 800, while Whitehorse, has 2,500.

The keen, blue-eyed northland "boss" has all the threads of the country's history, past, present and future, at his fingertips. A Winnipeg man, he formed the first body of law and order in the Yellowknife area and became its first chairman in 1938. Now, as the Yukon's chief executive, he also carries the titles —and does the work—of registrar of land titles, agent of the Department of Public Works, and *ex-officio* mayor of Dawson.

Communication and transportation are the two obstacles in the way of progress now, he believes. Solve these and population will begin to move in. The opening of the Alaska Highway has already brought some settlers north, and the authorities believe more will come with the completion of other new roads under construction.

The country still has, Commissioner Gibben says, "some of the richest silver ore in the world."

The Yukon will continue to build its future on its mineral wealth but, in growing away from frontier days, it is also taking on all the facets of a well rounded life.

Sternwheelers take six days to go up stream from Dawson to Whitehorse, and only two for the return voyage. A. Leitch.

"Likely young women are snatched off despite the tears of parents."

Early Days in Winnipeg

By W. J. Healy
Cartoons by James Simpkins

A CLUSTER of a few houses, a village too small to be a dot on any map, had begun to be known in the late 1860's, in the settlements along the Red and Assiniboine rivers, as Winnipeg. It was close by Fort Garry, the walled stronghold of the Hudson's Bay Company, and was a quiet village except in the spring and the fall, when the plains hunters gathered at Fort Garry to equip themselves for the buffalo hunting expeditions which began in June and August. In 1867, when the present provinces of Ontario, Quebec, Nova Scotia and New Brunswick were united into the Dominion of Canada, there were less than two hundred people living in that village all the year round. In 1870, when Manitoba became the fifth province, the population of Winnipeg was set down as "about 300," and by the fall of 1871 as "about 700." On November 1, 1872, a census showed the population to be 1,019 males and 448 females, a total of 1,467. In its first issue, eight days later, the *Manitoba Free Press* said:

"This surplus of males frequently gives rise to inconveniences. Young men mourn over the lack of society, and families coming from Canada sometimes find their female members in great demand, and likely young women are snatched off despite the tears of parents or employers, almost realizing again Tom Hood's anecdote of an offer of marriage made from the Australian coast through a speaking trumpet to a vessel approaching with young ladies on board."

The reminiscences of Justus A. Griffin written a few years later record that "there were many saloons," and also that "the streets were good in winter and dry weather, but in wet weather they became exceedingly bad, and pedestrians had to wade through mud. In the springtime, the small stretches of sidewalk on the east side of Main street floated like barges." Mary Fitzgibbon, in her little book, *A Trip to Manitoba*, wrote of Winnipeg as she found it in the spring of 1887:

"The first thing that struck me in Winnipeg was the Mud. I had heard that the Red river mud was the worst in the world, and I now for the first time realized how bad mud could be. Not only was the roadway so soft that every turn of a wheel loaded it inches deep with the sticky compound and made it so

heavy that the driver had frequently to stop and clear his wheels with a stick, but, trodden from crossings on to the sidewalks, it covered them with a slimy mixture very difficult to walk on. From the windows I could see people slipping and sliding about so much that anyone ignorant of the cause might have attributed their unsteadiness to the strength of their morning libations, the absence of women from the streets making that solution appear possible, if not probable."

Never was there a city that from its very beginning had greater need of public improvements. The first meeting called to take action to have Winnipeg incorporated, in order that these improvements might be made, was in 1871. A bill to incorporate the city was introduced in the legislature. It was rejected. Indignation meetings followed. There was talk of tarring and feathering. There were demonstrations against the legislature, which held its sessions on the second floor of the court house and jail on Main street. To that floor access was had from the street by an outer stairway, up and down which the sergeant-at-arms, Louis de Plainval, and the gentleman usher of the Black Rod, Captain Villers, (for the little legislature had an upper chamber) walked backwards before the lieutenant-governor, with frequent bowing from the waist, to the loud derision of the populace, while the guard of honour kept the military rigidity of their faces unmoved.

The agitation for incorporation grew so strong that, after a second rejection of the bill, a special session of the legislature was called in November 1873, at which a modified form of the bill was introduced. It was successful in both chambers. There were mass meetings of rejoicing on Main street, with bonfires. The first municipal election was held on January 5, 1874. Out of 388 names on the voters' list, 562 votes were cast for the mayoralty candidates, 174 of the qualified citizens having voted twice—absent-mindedly or otherwise. The first mayor was Frank Cornish, Q.C., of whom it is related that, sitting one morning as police magistrate, he laid a charge against himself of having been guilty of disorderly conduct the night before. Leaving the magisterial chair, and standing submissively before that seat of authority, he pleaded guilty. Resuming his place as police magistrate, he fined himself five dollars.

". . . walked backwards before the lieutenant-governor, with frequent bowing from the waist, to the loud derision of the populace."

"The first lieutenant-governor arrived in a birch-bark canoe."

In 1870 the total population of Red River, the district of Rupert's Land which became Manitoba, was 11,405, of whom the whites numbered 1,565, the Métis, 5,757, and the English-speaking people of mixed blood, 4,083. When the Company surrendered its territorial rights to the newly formed Dominion on terms, the vast area from Ontario to British Columbia became Canadian soil, and Winnipeg became known to the world as the gateway to that immense area.

The first lieutenant-governor of Manitoba, Adams George Archibald, arrived in a birch-bark canoe from Pembina, the Company's frontier post on the Red river, on September 2, 1870, and established himself in Fort Garry, which became the residence of the lieutentant-governors until 1883. The north gate, which gave access to Government House, is preserved as a historic relic in a little park made for it. That gateway faced an area of 500 acres marked out as a camping place for all who came to trade with the Company. Adjoining that area was the property of the leading man in Winnipeg who traded independently, Andrew McDermot, one of whose daughters became the wife of William Mactavish, the Company's Governor-in-chief of Rupert's Land from 1864 to 1870. Of McDermot, who made himself the wealthiest man in Winnipeg, his friend Sheriff Ross wrote that "he could speak the language of the Indians better than the Indians themselves, could run like a deer and could endure cold like an Eskimo dog," and that "there was no better judge of men and horses in Red River, nor any man who was his equal in address, humour, shrewdness and the power of making money." He played a leading part in the early years of the city, and lived until 1881.

The Kildonan settlement on the Red river north of Winnipeg had its beginning threescore years before the incorporation of Winnipeg, when Lord Selkirk, a truly Scottish combination of idealist, soldier of fortune and business man, who had acquired a large interest in the Hudson's Bay Company, brought out settlers from Scotland by ship to York Factory on the Bay, which thus was the gateway for the pioneers of agricultural settlement in the West. The French-speaking people, who had come from Quebec by the long canoe route, were settled likewise along the two rivers, south and west from Fort Garry, for generations before the Red and the Assiniboine became Canadian rivers. They had St. Boniface, across the

Red from Fort Garry, as their central place, with the cathedral chimes on Sundays from the "turrets twain" and the Angelus bell which Whittier's poem made familiar in many a household far and wide, calling at morning, at noon and at day's end

"To the boatman on the river,
To the hunter on the plain."

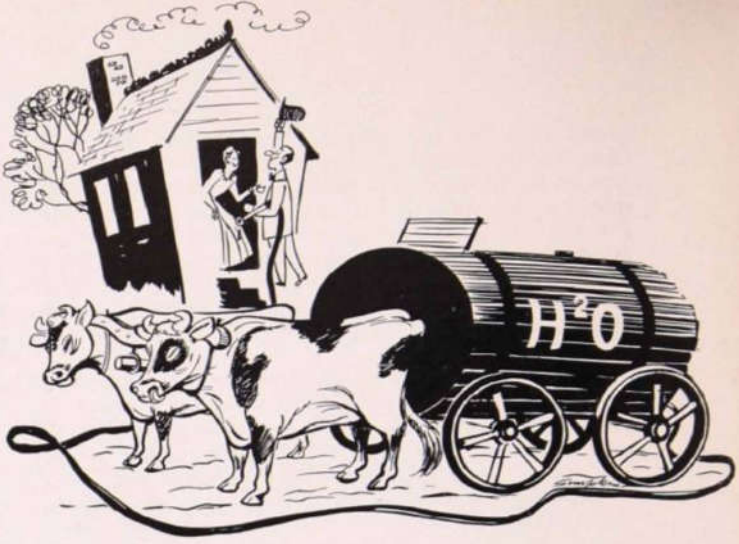
At the time of the arrival of Lieutenant-Governor Archibald in the newly established province of Manitoba, there was only a once-a-week mail service, by horse in summer and by dog-train in winter, between Winnipeg and St. Cloud, Minnesota, where the railway from St. Paul ended. A telegraph line was constructed the next year to the frontier post of Pembina, and Winnipeg was then in daily touch with the outside world. But there was no stage line, and only one steamboat—the H B C's *International*.

In 1872 arrived at Fort Garry the sternwheeler *Selkirk*, owned by James J. Hill, an active young Canadian of St. Paul who was destined to play a leading part in the railway development of the West. The profits of the first trip of the *Selkirk* were reported to have paid almost the whole cost of its construction. By 1874 there were seven sternwheelers plying the Red, and the picturesque cross-country freighting by caravans of ox-drawn Red River carts were becoming a thing of the past. "The creaking of the wheels is indescribable," wrote the poet Charles Mair. "It can be heard a mile away. It is like no other sound you ever heard in all your life, and makes your blood run cold." No grease was used on the wooden axles and hubs, because it had been found that the dust from the trails gathered in the grease and wore them down.

The first railway engine to be seen in Manitoba, the C.P.R.'s *Countess of Dufferin* (which now stands in front of the C.P.R. station), was brought to Winnipeg on a barge by the *Selkirk*, to be used in railway construction. It arrived in 1877, the year in which the Governor-General and Lady Dufferin paid a visit of eight weeks to Manitoba. As steamboat transportation sounded the knell of freighting by Red River carts, so also it is to be said that the *Selkirk*, by bringing the *Countess of Dufferin* to Winnipeg, sounded the death knell of steamboat transportation on the Red.*

In March 1873, the first ornamental street lamp was erected on Main street, in front of the Davis House, whose proprietor, Robert Atkinson Davis, was premier of Manitoba from 1874 until 1878. Of that kerosene lamp a chronicler of the time wrote that "it looks well, and guides the weary traveller to a haven of rest, billiards and hot drinks." Two days later a dog-train came down Portage avenue and turned south on Main street, carrying to a Hudson's Bay Company meeting a noted figure in the Company's history, W. J. Christie, who had travelled two thousand miles by dog-train from Fort Simpson on the Mackenzie river to attend that meeting. In June of the same year the last dog feast of the Indians was held at Point Douglas, within the present city limits, where that religious festival of three days had been held every summer since before the coming of the first white men.

The city's water service consisted at first of Red River carts, each carrying a puncheon of water taken



"In April 1873 an improved house-to-house water service was started."

from either the Red or the Assiniboine, with a couple of pails and a long-handled dipper hanging behind. In April 1873, what was announced as "an improved house-to-house water service" was started by George Rath—a tank on four wheels drawn by a team of oxen, with a pump and forty feet of hose, "by which means the water can be introduced into the houses of our citizens without the pail system." In January 1874 appeared a covered wagon with a stove in it, from Moorhead in Minnesota, with "California fruit and other delicacies." The first oysters had arrived earlier, in February 1871. The first attempt at a transportation service began in July 1877, when an omnibus appeared on Main street. But it was soon discontinued. The first circus came in June 1878. Its clown, Dick Burden, remained after its departure and became a town character. He often appeared on the street in disguise. One of his favourite disguises was clerical garb, in which he delighted to produce an effect of surprising contrast by the tone and character of the reply he would make when spoken to by a newcomer. He was Winnipeg's first bill poster.

The first railway train operated in Manitoba made the run from Emerson to St. Boniface in December 1878 over the line constructed by the St. Paul, Minneapolis and Manitoba Railway Company, which operated a steam ferry from its terminus across the Red river to Winnipeg. That company was created by George Stephen (who later became Lord Mountstephen) of Montreal, with James J. Hill as general manager, and Donald A. Smith (later Lord Strathcona) as the leading member of the board of directors. It was the beginning of an undertaking which had developments culminating seven years later in the completion of the Canadian Pacific Railway from Montreal to Port Moody.

To look forward a few years, it may here be noted that the first Canadian Pacific Railway train from Montreal, headed for the coast, arrived in Winnipeg on July 1, 1886—and never before or since has Dominion Day been celebrated more enthusiastically than it was on that day. The jubilation began by the firing of a salute by the Winnipeg Field Battery. When the train came to a halt there was a *feu de joie* from the 90th Battalion, fondly known as "the Little Black Devils"—the nickname they were given by the Indians. Mayor Wesbrook and City Clerk Brown mounted the cowcatcher and adorned the locomotive with a gilt-edged streamer, "Winnipeg's Welcome."

*This pioneer engine is said to have been the first on the Canadian Pacific Railway, and bears the inscription "C.P.R. No. 1." Lady Dufferin, however, in her journal of October 2, 1877, refers to it as "Engine No. 2 of the Canada Pacific Railway." She saw it at Fisher's Landing.—Ed.

The aldermen stood in a ring, there was an address of welcome, responded to by Superintendent Egan, and the train, without a moment of unnecessary delay, went on its way westward. Then all Winnipeg devoted itself to a celebration which lasted three days, with horse races, a regatta on the Red, lacrosse, baseball and other sports, a balloon ascension, a banquet in the Queen's Hotel, a grand ball in the Royal Roller Rink, band concerts, fireworks—altogether the most sustained outburst of high spirits in the city's history.

A fortnight later Sir John A. Macdonald, the prime minister of the Dominion linked together now by steel from coast to coast, arrived on his way across the continent. "I told my friends in 1881," he said in a speech to a mass meeting of welcome, "that at my age I could not expect to see the completion of the C.P.R. in ten years, but that if I could not travel over it myself, I would at least look down on those who did. Some of my opponents were so kind as to suggest that I might have to look up. But I have disappointed both friends and foes, and I am now doing it on the horizontal."

The histories of the early years of many cities on this continent have their chapters telling of land booms. The Winnipeg boom, which began early in 1881, out-topped most of them. It started in speculation in Winnipeg building lots and in lots in Manitoba towns and townsites, some of which existed only on paper, and it flared in a mounting delirium until lots in pioneer places hundreds of miles away in the west—even in Port Moody, which was said to have been decided upon as the Pacific terminus of the C.P.R.—were bought and sold in a wild turmoil of excitement. The hotels were crowded, the bars were noisy early and late, and all the frontier gambling devices in operation. Among the stories current about Jim Coolican, known as "the Real Estate King," whose place of business was the scene of daily and nightly auction sales of building lots while the boom lasted, was one that when his winnings were specially large he rejoiced in a champagne bath. The present writer remembers seeing him in Toronto in December 1881, a plump, red-cheeked man with a black moustache and eyes that twinkled like the diamonds he was fond of sporting. He wore a sealskin coat, for which he was said to have paid $5,000, and a sealskin cap. The boom collapsed suddenly, and many hopeful souls found that their rose-tinted dreams of wealth to be won in land-gambling had vanished like the mirages one often sees on the prairie horizon on hot midsummer days, far and shining. After the boom burst, Coolican, having spent his winnings in prodigal extravagance, settled down eventually to the selling of wagons and buggies. The boom, while it lasted, gave Winnipeg the wildest sixteen months of its existence.

The first automobile in Winnipeg was brought to the city in 1901 by Professor E. B. Kenrick, of St. John's College. It was a Knox car, built like a buggy, with a steering handle which at need could be turned down so as to stick out in front, to be used in pulling it ignominiously, amid jocular advice from onlookers. But that little "horseless carriage" was the precursor, the foretoken, of a new era. The horse and buggy era was coming to its end in Winnipeg, as everywhere else. The great inflow of settlers had begun to spread over Western Canada in the years before the turn of the century, the city began to grow with extraordinary rapidity, and the conditions of its life were changing and passing away. With the activity in the building of railways, Winnipeg was to become the distributing source of supplies for all the prairie area, and the future would see an ever-greater outflowing of wheat, the main product of the agricultural industry on the prairies, through Winnipeg to the markets of the world.

But to return to the time of the city's infancy, we have its growth in its first six years described in the speech of Mayor "Sandy" Logan, on his being re-elected in December 1879. "Winnipeg has grown," he said, "from a little village into a city. Today nearly a thousand dwellings stud the plain, where ten years ago they could be counted on the fingers of two hands." Confidently he added: "That Winnipeg is destined to be the great distributing and railway centre of the Northwest admits of no denial." His vision was of a panorama of Western Canadian progress to be unfolded in the coming decades—the inflow of immigration, the spreading of wheatfields to the circling skyline, the hump-shouldered elevators rising where settlements clustered into villages, the growth of towns and cities linked by a network of railways radiating from Winnipeg. He could not have foreknowledge of how the growth of the Northwest, the creation of new provinces which would have their prosperous towns and cities, the importance of the extension of Manitoba to Hudson Bay, the immense volume of hydro-electric power carried across country on cables stretched on steel towers of which he had no dream, the growth of manufacturing, the vast, varied and incalculably valuable mineral resources in the northern regions and all the other natural resources, in addition to the fertility of the prairie loam, would prove serviceable in furthering the development of Canada's national growth and prosperity. If he could have known how Manitoba was to become the central province of the Dominion, the keystone in the arch of Western Canadian and Eastern Canadian interests bound together in the strength of the Canadian national spirit from ocean to ocean, he would have viewed with still greater confidence in its future the collection of dwellings studding the plain, which had grown from a cluster of houses that, in the late 1860's, had begun to be known as Winnipeg.

"The first automobile was brought to the city in 1901."

Grassy Narrows

Photographs by
Richard Harrington

Grassy Narrows post is about twenty minutes by plane northeast of Kenora, on a lake that is part of the English River system.

A Norseman plane ties up at the post dock, and is greeted by the local Indian chief, John Loon.

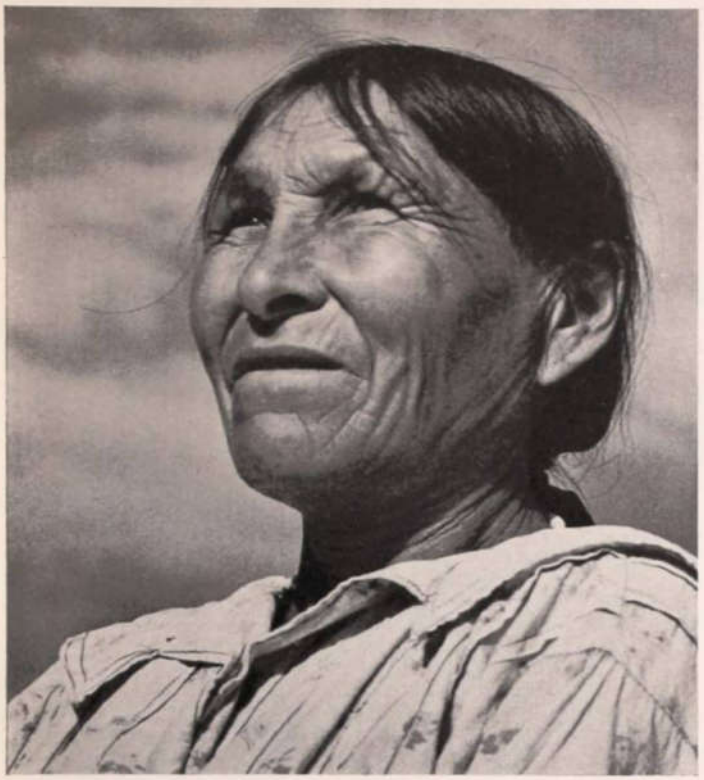
Trade goods brought in by air are wheeled in a barrow from the warehouse to the store.

The log dwelling comprises three bedrooms, a kitchen, and a living-dining room. On the right is the Wincharger for providing electric power.

Clerk Jim Allan keeps his evening "sked" by radio telephone with the Company's Minaki post.

Fishing is excellent in this country. These were caught in Delaney Lake, south of Grassy Narrows.

Jim takes Sunday off and goes fishing. Here he tries his luck near Lutz's camp on Delaney Lake.



Ojibway chief John Loon and his wife. He wears medals from Calgary Assembly of Indians, 1901, and the Northwest Angle Treaty of 1873.

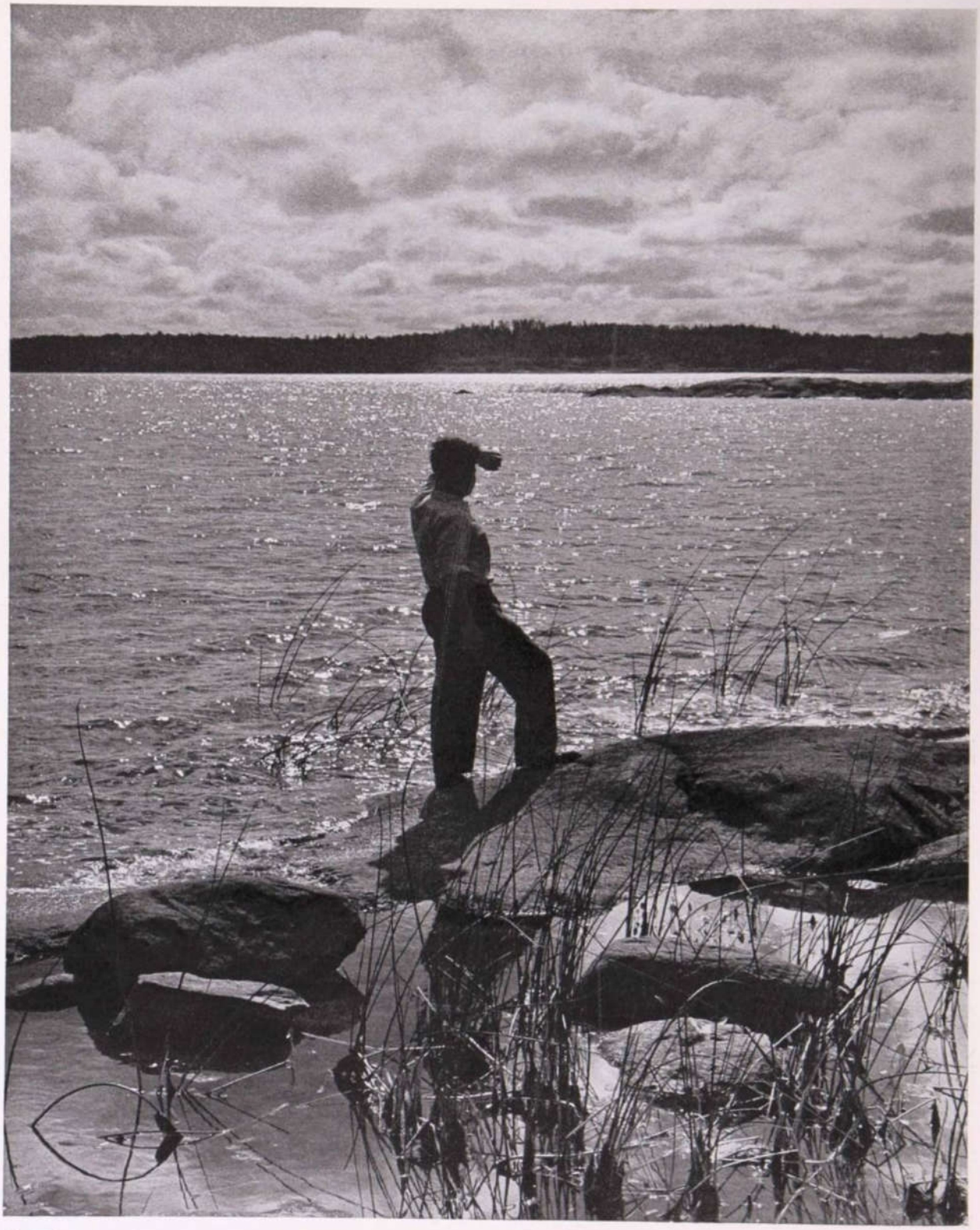
As of old, the Indians come to stock up at the house of "Mamoochegan"

"Big Nose," oldest member and recognized comedian of the Grassy Narrows Indian Reserve, squats in his tent doorway, getting ideas from an old copy of the "Saturday Evening Post."

A party of vacationists, having shopped at the post, push off for the happy fishing grounds.

The canoe that walks like a man.

The camera looks down on a passing canoeist from the top of a cliff, where stunted jackpines cling precariously to fissures in the rock.



The photographer looks around for one last picture.

He gets it.

Winnipeg as it appeared in the early part of Consul Taylor's regime. Main street is in the foreground. The building in the centre is Apotheca
3, Archbishop's Palace. 4, St. Boniface Cathedral. 5, Grey Nunnery. 6, Custom House. 7, Store of Dr. Schultz, later lieutenant-governor of
crumble in 1874, was rebuilt, and finally collapsed in 1882. From a sketch in

Consul Taylor of Winnipeg

by Harold C. Knox

The second half of an article on James W. Taylor, United States Consul at Winnipeg from 1870 to 1893. The first half appeared in the March Beaver.

THE government of Riel was followed by that of Lieutenant-Governor Archibald. On almost every matter of the day, Consul Taylor made a report. For example, the elections, which were scenes of the greatest strife. On September 22, 1873, he wrote:

"About noon of the day of election (Sept. 19th) a party of about thirty men left Winnipeg, crossed the river and destroyed the poll books of St. Boniface. The officers were taken by surprise, but before the rioters could recross the river, a melee issued in which the St. Boniface people would have been too much for the Winnipeg mob had not the latter drew and fired revolvers upon their unarmed opponents and were thus able to reach the ferry boat. Two of the French were wounded but not mortally.

"About five o'clock in the afternoon a larger mob, not less than a hundred, made a rush upon the polling booths in Winnipeg, but were repulsed after a furious street fight. In this affair the chief of police was badly but not dangerously beaten. The rioters were supporters of Mr. [A. E.] Wilson, who may be designated as the Canadian candidate against Mr. Donald A. Smith, the chief commissioner of the Hudson's Bay Company. Their object was to destroy the evidence of the unanimous vote for Smith in St. Boniface, and his majority of 69 votes in Winnipeg, hoping that the Scotch parish of Kildonan and the English parishes of St. John's, St. James and Headingly would decide the election against him. Early in the evening it was evident that Smith was elected and the mob became more violent. To the number of 150 to 200 they gathered in the principal street, were harangued and excited by speeches from a lawyer named Cornish, formerly of London, Ontario, and Mr. Mulvey, the editor of the *Liberal* and the head of the Orange organization in the province, and at length made a rush upon the newspaper offices of the *Manitoban* and *Le Metis*, which before ten o'clock were in ruins."

The cause of the turbulence was that, according to the law, no man could vote unless he was a resident

ries Hall, run by Dr. C. J. Bird, speaker of the legislature. Numbered buildings are: 1, A. G. Bannatyne's house. 2, College St. Boniface. Manitoba. 8, Grace Church. 9, Fort Garry. 10, Canada Pacific Hotel at the northwest corner of Broadway and Main. This building started to the "Canadian Illustrated News" of Nov. 28, 1874, done from photographs.

of the country for three years. The newcomers, some of them volunteers of the Wolseley expedition, thinking that they had saved the country, resented not being able to vote.

Later, when some Métis were arrested at the boundary and put on trial for treason, the consul felt that it was a violation of the amnesty promise, and also a matter that affected him as an American. The boundary line had not yet been definitely fixed. There were really two lines and the Métis were caught between the two. Witnesses claimed that the arrested men were United States citizens living in Pembina county. The result was that the trial was dropped, the Canadian government not being anxious to fan old fires.

When Winnipeg was threatened with Fenian raids, Consul Taylor sent a telegram to General Sherman, so that he might issue instructions to the American commander at Pembina. As a result the raiders were captured and taken back across the line. For this Taylor was thanked by Governor Archibald and received the following from the acting secretary of state at Washington:

"Your course in addressing the general of the army directly was irregular and should not be repeated without specific instructions. Information concerning the affairs of your consulate or consular district should be communicated to this department only, leaving it to decide whether it should be laid before any other department of the government."

But if Consul Taylor had not acted on his own initiative, the Fenians would never have been stopped at the border in time.

Through the years Consul Taylor was instrumental in smoothing relationships between Canadians and Americans. The troubles of 1885 felt his diplomatic touch. He is credited with saving the West from an Indian invasion from the south and a vast extension of the Indian troubles during the rebellion. It was to him that Riel made his final appeal as an American citizen. Consul Taylor forwarded this appeal to Washington, accompanied by a letter dated November 3, 1885. In part it reads:

"The impression prevails that there will be no further respite of the execution of Riel on the 11th of November. There only remains a possibility that the Canadian Government will constitute a commission, including an expert from the United States, to report upon the insanity of Riel.

"On my return to Washington from Ottawa in 1870, the Secretary of State, Mr. Hamilton Fish, showed me despatches from the Canadian premier to Sir Edward Thornton, British Minister, stating that the Manitoba Act was satisfactory to the Red River deputation, that it was a message of peace; that Colonel Wolseley's expedition was in no sense hostile and only for police purposes, and therefore the British Minister, on behalf of the Canadian Government, asked the Government of the United States to withdraw an order prohibiting the passage of troops and munitions through the Superior Canal.* Mr. Fish said that under these circumstances there seemed to be no ground for refusing the request, and requested my opinion. In reply I ventured to suggest that Sir Edward Thornton should be asked to give a pledge that

*At Sault Ste. Marie

there should be no exception—not even the leader of the movement, Louis Riel—to universal amnesty. Mr. Fish fully concurred, and I have no doubt that Sir Edward Thornton committed the Home Government as well as the Canadian Government to such arrangement as a condition precedent of the order removing all obstacles to the movement of Colonel Wolseley's troops.

"In respect to Louis Riel there has been a violation of this international agreement. As a result instead of being an honoured and respected citizen, he has been an outlaw for fifteen years.

"I will add nothing more, except an expression of the hope that, at the last moment, the Government of Canada will not refuse a commission to ascertain whether the reason of Riel has not become unsettled in consequence of the persecution and injustice he has been made to endure."

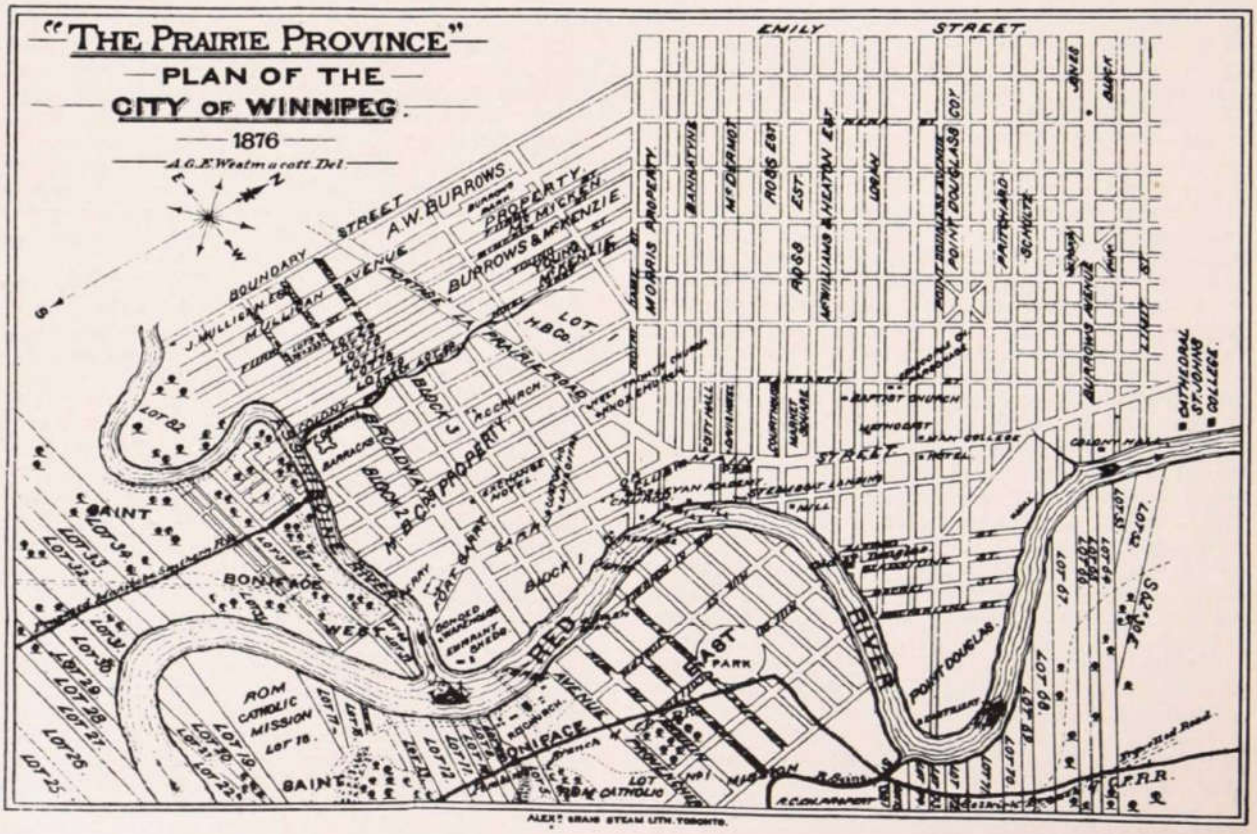
Consul Taylor's wish that such a commission be sent to Regina was granted. Two doctors were sent out: Dr. Valade, a French-Canadian, and Dr. Michael Lavell, who in 1885 was in medical charge of the penitentiary at Kingston, Ontario. Before Dr. Lavell left, Sir John A. Macdonald wrote him a private and confidential letter, which is now in the Queen's University library, and which was published for the first time in the *Queen's Review* of April 1934.

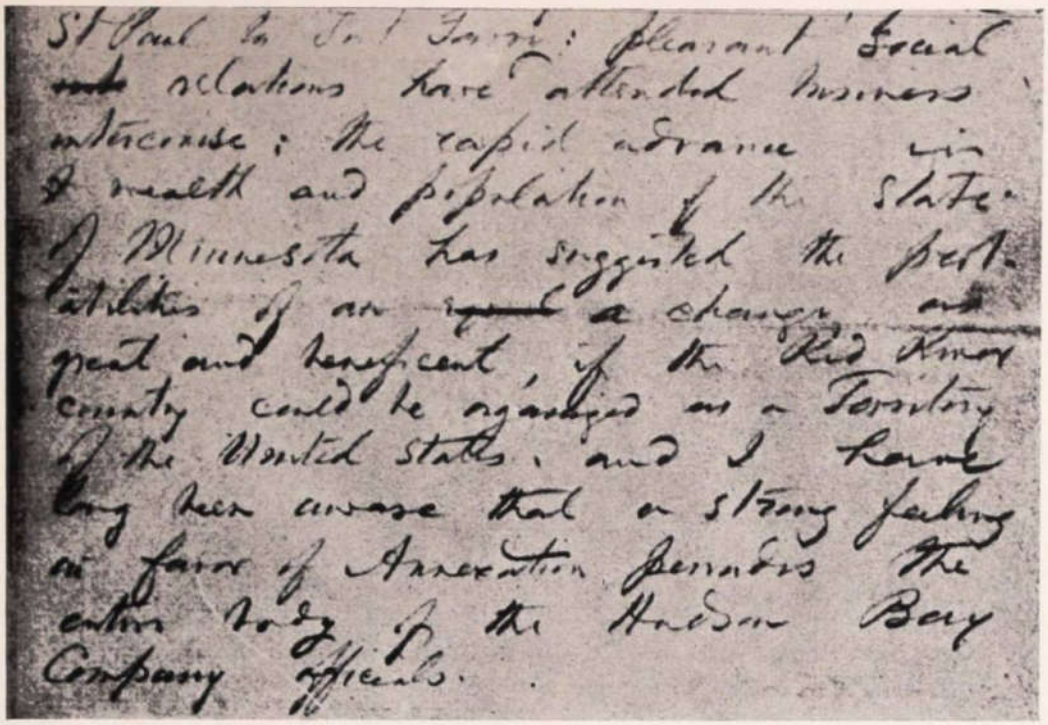
In the first paragraph, Sir John writes: "We desire that your trip and its object should be kept a profound secret until after your arrival in Regina, and in fact until you have made your Report." Later he goes into detail to instruct Dr. Lavell on his task. "Remember that the jury have decided that he [Riel] was sane when his treasons were committed and at the time of his trial. The judge approved of the verdict and the Court of Queen's Bench at Manitoba on appeal confirmed it. You cannot, therefore, go behind that verdict, and your enquiry will be limited to the simple question whether he, at the time of your report, is sufficiently a reasonable and accountable being to know right from wrong. If a man has raging dementia after conviction the law humanely postpones the execution so that he may have an opportunity of preparing for death, but if—whatever illusions he may have—he still knows right from wrong the law should be allowed to take effect."

In the last paragraph, Sir John refers again to the necessity for secrecy: "You must have some business in New York, or elsewhere, so as to throw people off the scent." The commission, of course, found Riel sane, and he was hanged.

In spite of the westward move of the Canadian government, Consul Taylor never gave up his hope of annexing Canada—at least the western portion of it—to the United States. His first report on the west in 1863 directed the attention of Canada to the west. The actual proposal of annexation fathered partially by Taylor in 1867 for the union of Canada and the United States was one of the factors bringing about the formation of the Dominion of Canada. Even in 1885 the consul hoped for the union. He wrote: "I proposed in a report published as a Congressional Document a plan of Union between the United States

Winnipeg as it appeared in plan three years after incorporation. Consul Taylor lived for a time at the Davis Hotel (formerly Emmerling's) seen above the word "Main." **Courtesy Wm. Douglas.**





St Paul Pa Jan 25 1870

Sir: Pleasant Social relations have attended business intercourse: the rapid advance in wealth and population of the State of Minnesota has suggested the probabilities of an early a change, as great and beneficent, if the Red River country could be organized as a Territory of the United States, and I have long been aware that a strong feeling in favor of Annexation pervades the entire body of the Hudson Bay Company officials.

Above: Part of the draft of a letter from Taylor to the U.S. Secretary of State, dated Jan. 25, 1870, at Washington. Some wishful thinking of a high order is evident in the last sentence. Minnesota Historical Socy.

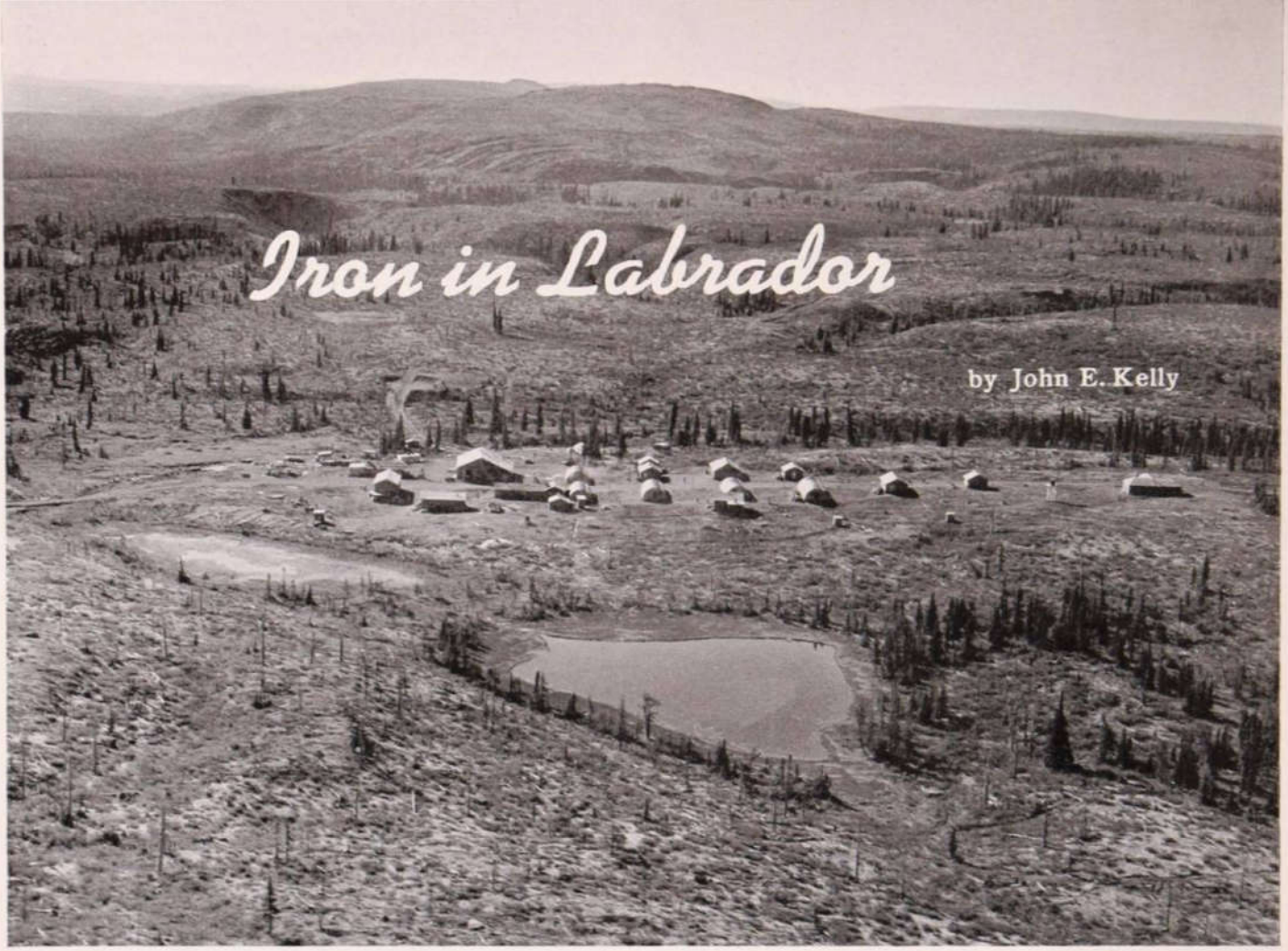
and Canada, which I yet believe will become a practical measure. . . . In view of current events in Manitoba, you will understand my desire to assist in every way possible in the adjustment of the future relations of the United States and Canada, believing that the extension of the American union northward to be a practical measure within a brief period."

Eight years later—on April 28, 1893—Consul Taylor died without seeing the realization of his dream. On that day the *Manitoba Free Press* paid him this tribute:

"A foreigner engaged in a foreign mission, he was no stranger in the households of Winnipeg. We all knew him and we all loved him. Scarcely a home in the city but had been brightened by his kindly, gentle, genial presence and not one to which at any time he would not be given a glad welcome. He went in and out amongst us for so many years that long ago he came to be regarded as one of ourselves. Proud always of his own country and full of affection for it, and faithful to every duty committed to him, he, notwithstanding, so identified himself with our life as to become part of it. . . . The one who takes his place will no doubt deserve and receive the respect of the people of this city. But no other can be to us what Consul Taylor was, for no other can grow into our hearts as he did. . . ."

To this day a bunch of wild prairie anemones is placed beneath his picture at the Winnipeg city hall on the anniversary of his death. It is a reminder that one of the consul's most charming customs was to gather the "prairie crocuses" in the spring and present them to his friends in Winnipeg.

Louis Riel. An engraving made from a photograph. St. Boniface Archives.



Iron in Labrador

by John E. Kelly

Base camp at Burnt Lake, P.Q., from which Hollinger has located three hundred million tons of high grade iron ore. This is ideal mining country, with the ore on the surface
Labrador Mining & Exploration Co.

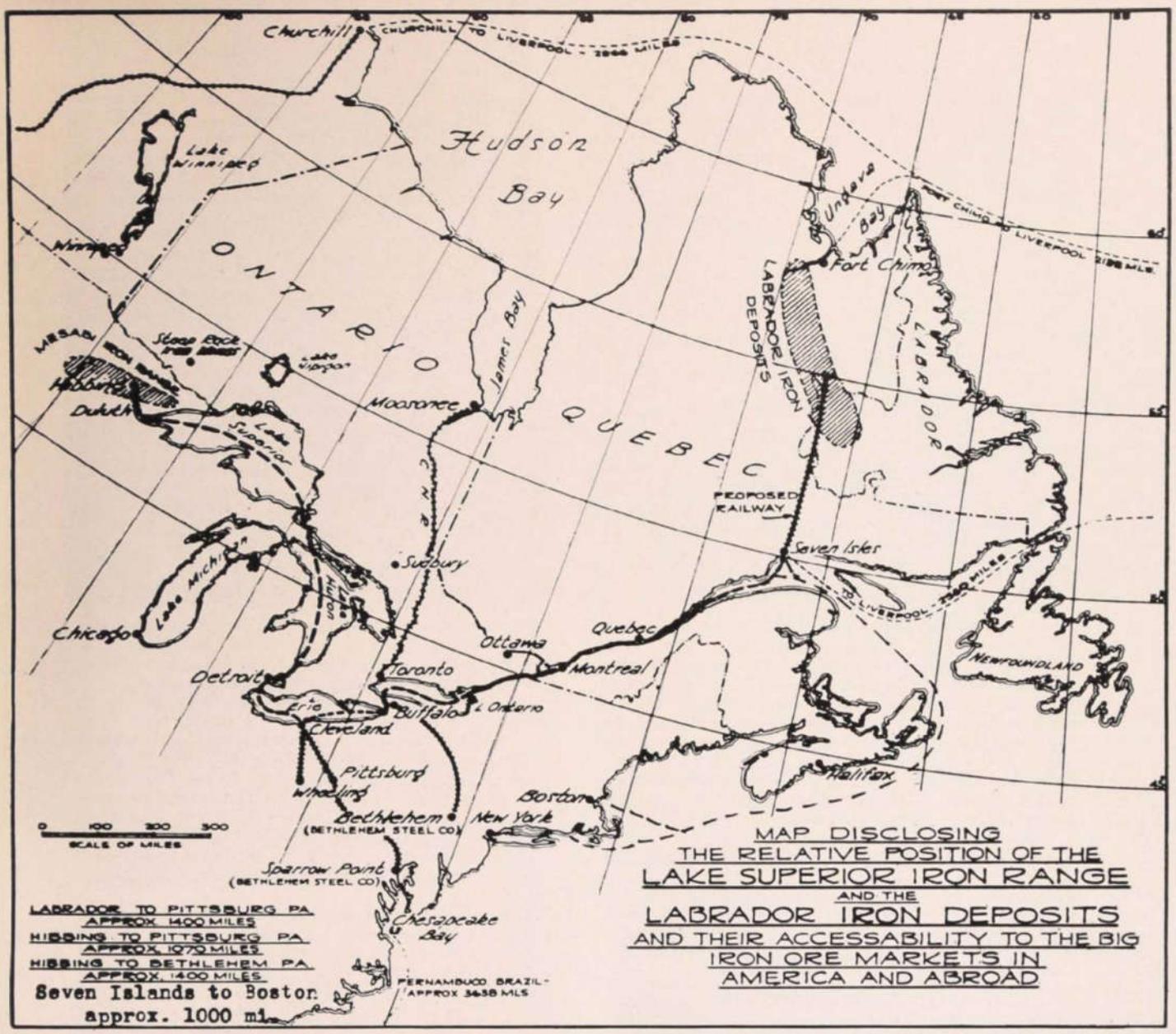
FIFTEEN years ago the interior of the Labrador Peninsula was a little known wilderness. Today it is discussed wherever steel is made or used. In a near tomorrow it will supply North America's iron sinews of peace and, if need be, of war. Its story is the latest chapter in that unrivalled treasure story, Canada, won by doggedness and daring over obstacles as great as any encountered during the gold rush to the Yukon.

Interior Labrador is a hard country—iron hard—and hard to get into. There are no roads from the outside. The height of land between the north shore of the St. Lawrence estuary and Lake Ashuanipi, where the iron deposits begin, climbs steeply to 2,300 feet. The rivers run north to Hudson Strait or the lonely coast of Labrador, choked with falls and white water, ideal for tomorrow's electric power but back breaking for canoe paddlers. Perhaps only in Canada could men state confidently that in five short years Diesel electric trains will haul ten million tons of ore out of such a forbidding wilderness each summer.

The man who knows the country best, Dr. J. A. Retty, chief geologist of the Labrador Mining and Exploration Company, who has travelled there since 1936, puts it bluntly: "The possibilities for agriculture are nil. In many places there is no soil, and where there is, it is so mixed with boulders as to be valueless for farming. Moreover, the growing season is very short, July being the only month without frost." Hardly the spot to settle down with the little woman and a bit of a garden, but good for mining, as the ore lies on the surface.

That great bare region was a challenge to Canadian scientists, who figured *something* must be there. In 1893 Dr. A. P. Low, of the Geological Survey of Canada, crossed the peninsula from south to north, looking for ore. Everywhere from Lake Ashuanipi to Hudson Strait, a distance of five hundred miles, he found iron formation. A treasure beyond measure; and beyond reach, for Canada had no steel works and transport was unthinkable. Dr. Low's report went into the files that have proved such happy hunting grounds for modern prospectors. Gold and lead, cobalt and uranium have been located, following hints in dusty papers written a half century ago by painstaking government geologists, who knew their discoveries would be valuable when transportation opened up the back country. They could not foresee the areoplane, but their work gives today's bush pilots mineral targets to head for.

Dr. Low's report started no rush, for he found mere traces of gold, and treasure seekers went off to the Klondyke for nuggets. Then in 1937 a Montagnais Indian trapper came out of the Ashuanipi country



The immense extent of the Labrador and Ungava iron ore deposits is shown on this map supplied by the author. The railway runs from Seven Islands to Burnt Lake.

carrying a piece of black rock that promises to unite eastern Canada and New England more closely than since the days of George III. The stone in Mathieu André's weathered hand was ore that popped eyes wherever mining men saw it. Fabulously rich, it assayed 68 percent iron, compared with an average of 51 percent for the Mesabi ores that now supply most of America's needs.

The old-time prospector, the storied sourdough with pack on back, rock hammer in hand, has no place in that land of huge distances. He would die of old age if he didn't starve to death before staking one of the modern concessions. Iron desposits are measured in hundreds of square miles, their profits in pennies per ton. They are being studied by the scientific methods in which Canada leads the world—the aeroplane survey and diamond drilling. The first requirement is a healthy bank roll, for the only way in to the iron fields is by plane. Personnel managers give the nod to wiry young applicants in preference to two-hundred-pounders with "second helping" appetites when the one-way trip costs seventy cents per pound. It's not the price but the delivery charge that counts. If the camp cook makes flapjacks on an oil stove, the kerosene costs seven dollars a gallon to fly in, his sack of flour seventy dollars! Last summer a Toronto company sent a geological party of twenty-one men into the iron country for a three-months stay. The bill for flying men, equipment and food—except trout—was $22,000, with another $8,000 for aerial photography! It takes a lot of iron to justify such expenses.

The iron is there, probably more than ever was in Mesabi. Canada's premier gold producer, Hollinger Consolidated—an old hand at mining, having earned

over $125,000,000 for its stockholders—was first in the Labrador iron country. With its American associate, Hollinger holds exploration concessions in Labrador and New Quebec that are larger than Nova Scotia. Hollinger has spent nearly $6,000,000 in the wilderness. An entire mining camp, Quonset huts, blacksmith shop, jeeps, bulldozers came over the mountains by air, along with 800 tons of supplies for a summer's work. Now, having tested only fifty of the known ninety miles of iron ranges on its property, and disregarding ore bodies other operators would class as bonanzas, Hollinger has proved the existence of over *three hundred million tons* of high grade iron ore and is getting ready for business.

But that $6,000,000 is only the ante in the giants' game of iron mining. Two hundred million dollars—sixteen dollars for every man, woman and child in Canada—must be spent to develop Hollinger's enormous reserves. The first railway, running 360 miles north from the port of Seven Islands on the lower St. Lawrence, has been started. Fifty million dollars will lay the rails. Another forty-five millions will provide the finest, largest, most modern equipment to be had, including giant Diesel electric locomotives and solid trains of ore cars. Construction of ore docks at Seven Islands will cost ten millions.

The country may lack civilized comforts, but it has two modern essentials in superabundance: iron ore and water power. Hollinger will power its inland headquarters of Burnt Creek and the mines from a $7,000,000 power plant using less than ten percent of the power available at Eaton Canyon on the Kaniapiskau River. Another million horsepower can be generated further north on the Kaniapiskau, while Grand Falls on the Hamilton River, in Hollinger's Labrador concession, one of the largest undeveloped sites in the world, is capable of producing 1,250,000 horsepower.

North of the Hollinger ore empire lie the concessions of four other Canadian companies. Extending in a patchwork pattern across Ungava to the icy waters of Hudson Strait, they comprise from 1,000 to 1,500 square miles apiece. Two are owned by major Dominion mining interests—Noranda and Frobisher Exploration—the others by independents—Quebec-Labrador Development Company and Fenimore Iron Mines. Last summer exploration parties working on these properties were visited by experts from several American steel companies, coming to assure themselves that Ungava will have adequate ore available. United States Steel Corporation, the great granddaddy of them all, is said to have an option on one of the northern concessions.

Experts agree that American steel makers will need Ungava ore, but Canada needs the St. Lawrence seaway to make delivery. Hollinger's railway and port will be complete, its mines ready to ship, three years before the seaway could be finished if construction started today. That's where New England comes in. The American northeastern states are losing industries to the Ohio River Valley and the Mid-West, where steel is cheaper. When a survey showed that 89,000 jobs were lost last year, New England's industrial leaders were stirred to action. They plan a steel plant of their own, using Canadian ores, to regain their lost business and attract new factories. No seaway is needed; Labrador ore can be laid down at Boston or New London more cheaply than the lower grade Mesabi ore now reaches Cleveland or Pittsburgh. Boston is only about 1,000 miles from Seven Islands, while Pittsburgh is half again as far.

To New England, Labrador ore may come as an industrial life saver. To eastern Canada, New England's dollars pouring in to buy shiploads of the black rock mean new settlements along the lower St. Lawrence, Yankee tourists driving up to see "where the iron comes from," good neighbourliness and prosperity all around. Regional leaders see Seven Islands as a town of 10,000 people, more if blast furnaces are built using the water power of the Moisie or adjacent rivers to smelt Hollinger ore electrically, manufacturing pig iron.

Iron formation on Gossan hill near the Larch River in Ungava —siderite with jaspilite bands. Fenimore Iron Mines.

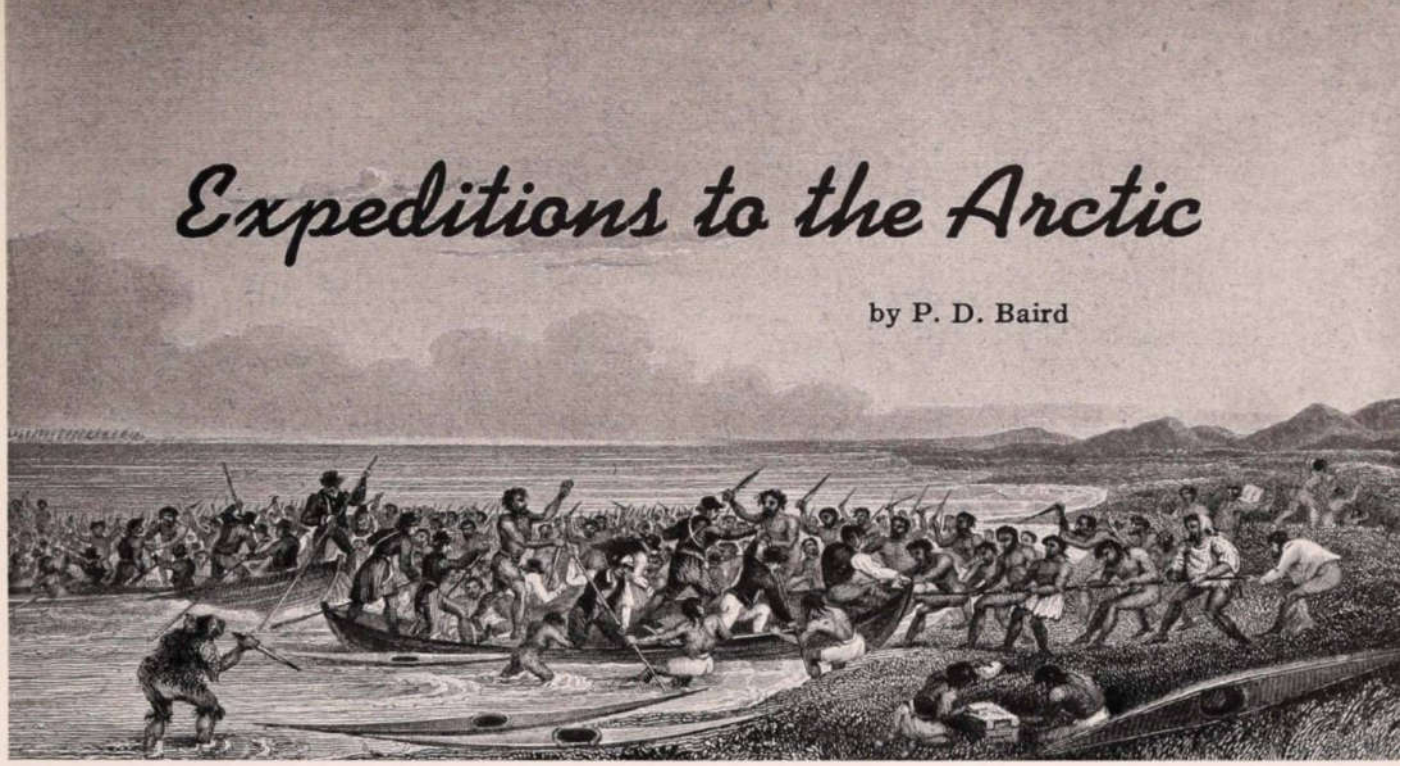
With the Labrador interior accessible by railway, Canada will gain another sports area of the rugged type. Southern Ungava or western Labrador is a land of lakes swarming with fish. Brook trout up to four pounds in weight are more than plentiful, their flesh firm and sweet from the cold water of the myriad streams racing north. Ptarmigan abound. There are geese, ducks, black bear, and woodland caribou.

Along the route of the railway are skiing sites that may cause headaches for St. Sauveur and Mont Tremblant. Within fifty miles of Seven Islands, the land rises to an elevation of 3,200 feet, with many abrupt slopes of 1,000 feet or more. The northern slopes are longer, stretching down to forty-mile-long Lake Ashuanipi. Winter temperatures are not lower than in western Quebec, but the snowfall is greater and longer lasting. A resort on the height of land could offer seven months of winter sports in a setting overlooking the Gulf of St. Lawrence.

W. H. Durrell, the tall lean general manager of Hollinger's Labrador development, who built Goose Bay airfield as a major overseas staging station in World War II, dispelled two legends that cling to that country. "They told us mining was impossible," he said, "because the ground was frozen two hundred feet deep and the black flies would drive us out. We found no permafrost, and I have not been bitten once!"

Expeditions to the Arctic

by P. D. Baird



Franklin's second expedition attacked by the Western Arctic Eskimos. In Arctic exploration, such hostilities were very rare.

This second part of an article listing the various expeditions to the Canadian Arctic deals with the period 1800-1860.

WITH the end of the Napoleonic wars, what might be termed the Golden Age of exploration of our region began, sparked by the British admiralty and particularly by its secretary, Sir John Barrow. In thirty years these sailors laid the foundations of our geographical knowledge of the northern coast of the continent.

As the map accompanying this instalment shows, the period between 1800 and 1860 yielded a great deal of knowledge about Canadian Arctic territory. It also saw the change-over from sail to steam at sea and the spread of the fur trade north and west giving better organized land communications.

In this connection some of the most important factors were the establishment of posts on the Mackenzie River and the delineation of Great Bear Lake by the North West Company. This largest northern lake was made known by the efforts of such wintering partners of this company as Alex. Mackenzie (not Sir Alex.) 1803-05, George Keith 1811-13 and W. F. Wentzel 1813- from their post at what was later, after its abandonment, Fort Franklin (31).

Key to Expedition list

Date. Leader of expedition (in capitals). Other important members of party. Names of vessels (if sea-borne) in italics.

O.—Objects of expedition.

R.—Results and important discoveries.

P.—Publications describing the expedition.

General publications describing this period

7. Markham, Sir Clements, *The Lands of Silence*, Cambridge, 1921.

8. Barrow, Sir John, *Arctic Voyages of Discovery*, London, 1846.

9. Brown, J., *The Northwest Passage and the Plans for the Search for Sir John Franklin*, London, 1858.

10. *Parliamentary Papers* (series indicated by P.P. in text). H.M. Stationery Office. Give details of most admiralty expeditions including sledge journals.

11. Masson, L. R., *Les Bourgeois de la Cie NW.*, Quebec, 1889.

12. Crouse, N. M., *The Search for the N.W. Passage*, N.Y., 1934; deals with voyages 25-36, and 49.

25. 1818—ROSS, Comdr. John (first voyage). W. E. Parry (cmdg. *Alexander*); H. P. Hoppner (lieut.); J. Nias, J. M. Skene, J. C. Ross, J. Bushnan, midshipmen; J. Edwards, A. Fisher, surgeons; Capt. Sabine, R. A., in H.M.S. *Isabella* (385 tons), H.M.S. *Alexander* (252 tons).

O.—To attempt to reach the Pacific by Baffin Bay. Plan submitted by (Sir) John Barrow.

R.—After locating a previously unknown tribe of Eskimo in Thule district of Greenland he skirted both Smith and Jones Sound and although he entered Lancaster Sound 30 Aug. 1818 he retreated rapidly, calling it a closed bay. After two landings on Bylot and Baffin Islands he sailed back to England October.

P.—Ross, J., *A voyage of discovery . . .* London, J. Murray, 1819. Sabine, E., *Remarks on the account of the late V. of disc. published by Capt. J. Ross*, London, 1819. Fisher, A., *Journal of a voyage of disc. . . .* London (undated), R. Phillips.

26. 1819-20—PARRY, Lieut. W. E. (first voyage). Lieut. M. Liddon (Cmdg. *Griper*); F. W. Beechy, H. P. Hoppner, lieutenants; J. Nias, J. C. Ross, J. Bushnan, A. M. Skene, midshipmen; Capt. E. Sabine, R.A; J. Edwards, A. Fisher, surgeons; in H.M.S. *Hecla* (375 tons), H.M.S. *Griper* (180 tons).

O.—N.W. Passage discovery.

R.—Major geographical discoveries, particularly Parry Islands' southern coasts. Penetrated past 110°W. meridian, thus winning prize offered by Admiralty. After wintering at Winter Harbour 26 Sept. '19-1 Aug. '20 failed to get appreciably further west and returned via Lancaster Sound. Parry demonstrated great skill in sound wintering technique and in late spring crossed Melville Island with a cart.

P.—Parry, W. E., *Journal of a voyage for the discovery of a N.W. Passage . . .* London, 1821. Fisher, A., *Journal of a Voyage of Disc. . . .* London, 1821.

Parry's ships, "Hecla" and "Fury" meet the "Lord Wellington" carrying Swiss settlers for Red River, and the Company ships "Prince of Wales" and "Eddystone" in Hudson Strait, July 16, 1821. From a water colour by Peter Rindisbacher in the Public Archives of Canada.

27. 1819-22—FRANKLIN, Capt. J. (first exped.). Dr. J. Richardson; G. Back, R. Hood, midshipmen. Overland with canoes and Canadian voyageurs.
   O.—To explore north coast of America from Coppermine eastwards. To aid Parry if necessary.
   R.—Reaching York Factory end Aug. 1819, continued to Cumberland House 22 Oct. '19, and then pushed on (18 Jan. '20) to Great Slave Lake and Ft. Enterprise 64° 28′ N., where wintered '20-'21. Trouble between trading companies resulted in shortage of supplies. Back made a winter journey south to restock. Left July 21 and reached mouth of Coppermine 18 July, Pt. Turnagain (108. W.) 16 Aug. Returning in early fall up Hood River suffered terrible privations. Ft. Enterprise was found unstocked and only Back's further quest for Indian help saved the remainder, who lost 10 men. Returned overland to Britain 1822.
   P.—Franklin, J., *Narrative of a journey to the shores of the Polar Sea*, London, J. Murray, 1823.

28. 1821-23—PARRY, Cmdr. W. E. (second voyage). Cmdr. G. F. Lyon, (Cmdg. *Hecla*); H. P. Hoppner, J. Nias, lieutenants, J. C. Ross, J. Bushnan, F. R. M. Crozier, midshipmen; J. Edwards, A. Fisher, surgeons; G. Fisher, astronomer; in H.M.S. *Fury* (375 tons), H.M.S. *Hecla* (375 tons).
   O.—To discover N.W. Passage via Hudson Strait and thence following mainland coast of America.
   R.—Entered Foxe Basin and pushed on to Repulse Bay, confirming Middleton's discoveries. From here northward up Melville Pena. examined minutely all bays and inlets till stopped at frozen Fury and Hecla Strait. Wintering twice, Winter Island 66° 30′ N. and Igloolik, had interesting contacts with Eskimo communities. Failing in second season to penetrate Fury and Hecla Strait, returned to Britain the way he had come.
   P.—Parry, W. E., *Journal of a second voyage . . .* London, J. Murray, 1824. Lyon, G. F., *The Private Journal . . . during the recent voyage . . .* London, J. Murray, 1824.

29. 1824—LYON, Capt. G. F.; E. N. Kendall, surveyor; in H.M.S. *Griper*.
   O.—To winter at Wager Inlet or Repulse Bay and complete survey of N. coast of America from Fury and Hecla Str. to Franklin's Pt. Turnagain.
   R.—Landed on Coates Island and reported on Thule natives there. Nearly suffering shipwreck twice in Roe's Welcome, was forced to return in crippled ship to England without wintering.
   P.—Lyon, G. F., *A brief narrative of an unsuccessful attempt to reach Repulse Bay*, London, J. Murray, 1825. Paton, J., *A journal of a voyage . . . in H.M.S. Griper*, Paisley, 1825.

30. 1824-25—PARRY, Capt. W. E. (third voyage). Cmdr. H. P. Hoppner (Cmdg. *Fury*); J. C. Ross, H. T. Austin, lieutenants; F. R. M. Crozier, midshipman; in H.M.S. *Hecla* and H.M.S. *Fury*.
   O.—To make, through Prince Regents Inlet, a passage to the sea bounding the continent and thence to the Pacific.
   R.—After struggling through exceptionally wintry August weather did not enter Lancaster Sound till 10 Sep. '24; entered winter quarters at Port Bowen (lat. 73° 15′) 1 Oct. '24. Sailing again 20 July '25, the *Fury* was wrecked by gales and ice on Somerset Island less than 2 weeks later. Her stores were all unloaded and cached and the two crews returned in *Hecla* to Britain.
   P.—Parry, W. E., *Journal of a third voyage . . .* London, J. Murray, 1826.

31. 1825-27—FRANKLIN, Capt. J. (second exped.). Dr. J. Richardson; Lieut. G. Back; E. N. Kendall, surveyor; P. W. Dease (H B C). Overland and by boats *Lion, Reliance, Dolphin, Union*.
   O.—Continued exploration of n. coast of America from Coppermine west to Icy Cape, Alaska (where Capt. Beechey's H.M.S. *Blossom* was expected).
   R.—Travelling from Britain via New York and river systems in 5 months reached Ft. Chipewyan 15 July '25. Passing Ft. Good Hope, H B C's lowest post, Franklin reached Mackenzie's mouth 18 Aug. Before returning he established winter quarters at Ft. Franklin (Great Bear Lake). Leaving again 22 June '26, Franklin and Back went west from the Mackenzie delta, turning back 16 Aug. from Return Reef 148° 52′ W (6 days before Elson from *Blossom* reached Pt. Barrow by boat). Richardson & Kendall went east to Coppermine, discovering strait named after his boats and part of Victoria Island, thence to Ft. Franklin on foot 1 Sept. '26. Return was made in winter '26-'27 to New York.
   P.—Franklin, J., *Narrative of a Second Exp. to the Shores of the Polar Sea*, London, J. Murray, 1828; Philadelphia, Carey, Lea, & Carey, 1828. Richardson, J., *Fauna Boreali-Americana*, London, J. Murray, 1829-37.

32. 1829-33—ROSS, Capt. J. (second voyage). Cmdr. James C. Ross; in *Victory*, steam paddle yacht.
O.—Privately outfitted by Felix Booth for N.W. Passage search.
R.—Sailing down Prince Regent Inlet, they missed Bellot Strait and wintered Felix Harbour '29-'30 and '30-'31. J. C. Ross crossed Boothia Isthmus first winter and reached Magnetic Pole 31 May '31. In summer of '31 *Victory* moved only slightly further north to Victory Harbour and was abandoned here after a third winter began to bring on scurvy. In summer of '32 they pulled boats to Fury Beach then sailed to Lancaster Sound but had to turn back and spend *fourth* winter at Fury's cache. Expedition was picked up by *Isabella* of Hull in Lancaster Sd. summer '33.
P.—Ross, Sir J., *Narrative of a second voyage in search of a N.W. Passage*, London, 1835. Huish, R., *The last voyage of Capt. Sir J. Ross*, London, J. Saunders, 1835.

33. 1833-35—BACK, Capt. G. (first exped.); Dr. R. King, J. McKay, G. Sinclair. Overland and by boat.
O.—To ascertain the fate of John Ross in the missing *Victory*.
R.—Overland Montreal—Ft. Chipewyan—Ft. Reliance, where wintered '33-'34. Heard in spring '34 of Ross's safe return but continued journey and made first descent of Great Fish (now Back) River. His maps as far as Montreal Island, at the mouth, remained the only ones till 1948.
P.—Back, G., *Narrative of the Arctic Land Exped. to the mouth of the Great Fish River 1833-35*, London, J. Murray, 1836; Philadelphia, Carey & Hart, 1836. King, R., *Narrative of a journey to the shores of the Arctic Ocean*, London, 1836.

34. 1836-37—BACK, Capt. G. (second exped.). G. Gore, R. McLure, mates, in H.M.S. *Terror*.
O.—As with Lyon ('24) to winter at Repulse or Wager Bays and complete coastal survey from Fury and Hecla Str. to Pt. Turnagain.
R.—Coasting up the Foxe Basin side of Southampton Island, *Terror* was beset 5 Sept. '36 and spent the whole winter drifting in great danger SE. till released 14 July '37 at west end of Hudson Strait. The crippled *Terror* was brought safely back to Lough Swilly, where she was beached.
P.—Back, G., *Narrative of an exped. in H.M.S. Terror*, London, John Murray, 1838.

35. 1837-39—SIMPSON, Thos., P. W. Dease, J. McKay, A. Sinclair. Overland and by boats.
O.—Sent by H B C to survey Arctic coastline from Franklin's furthest points to Point Barrow and Repulse Bay.
R.—Leaving Ft. Chipewyan 1 Jun. 1837, reached Mackenzie mouth 9 July and Return Reef, Alaska, 23 July. Last 4 days Simpson covered remaining distance to Pt. Barrow on foot, reaching there 4 Aug. Returning they established and wintered at Ft. Confidence (Gt. Bear Lake) '37-'38. Started for Coppermine 6 June '38 but only reached sea 1 July. Reached C. Alexander (106° 03′ W) 24 Aug. and then returned to Ft. Confidence. Again to Coppermine 22 June '39 and passed C. Alexander 26 July '39, reaching Castor and Pollux Bay (94° 14′ W) 19 August. Returned along s. coast of King William and Victoria Islands to Coppermine 16 Sept., after 1400 miles boat journey.
P.—Simpson, T., *Narrative of the Discoveries on the N. coast of America*, London, R. Bentley, 1843. Simpson, A., *The life and travels of Thos. Simpson*, London, R. Bentley, 1845. H B C, *Progress of N. America discovery for 1838*, London, 1839.

The Freedom of the City of London was presented to Capt. John Ross after his return from the Arctic in 1833, and the parchment was enclosed in this oak box, lined and ornamented with gold. The inside of the lid carries the inscription. Berry-Hill, New York, are the present owners.

36. 1845-48—FRANKLIN, Capt. Sir J. (third exped.). Capt. F. R. M. Crozier, Lieut. G. Gore. Total personnel 129. H.M.S. *Erebus*, H.M.S. *Terror*.
O.—Northwest Passage by route S. and W. from Cape Walker (98° W).
R.—The tragic loss of this whole expedition is well known, but the details of the voyage are still obscure as only one brief written record has yet been found. Wintering at Beechey Island '45-'46 after the ships had rounded Cornwallis I., they were then beset in Victoria Str. for two winters. After Sir John Franklin's death (June '47) the sick crews abandoned ship Apr. '48 and appear to have all died on the march southward to Back's R.
P.—Gibson, Wm., "Sir John Franklin's Last Voyage," *Beaver*, June 1937. Cyriax, R. J., *Sir John Franklin's Last Expedition*, London, 1939.

37. 1846-47—RAE, Dr. John (first exped.). By boat from York Factory.
O.—H B C expedition to complete Simpson's work from Simpson's furthest to Fury and Hecla Str.
R.—Leaving York Factory 11 June '46, he reached Repulse Bay 25 July and crossed Rae Isthmus by 1 Aug. Making little progress by boat, he returned to winter at Fort Hope, Repulse Bay. Starting by sledge 5 Apr. '47, he reached Ross's Lord Mayor Bay two weeks later. Returning, he started again 12 May to follow east shore of Committee Bay. Mainly afoot, he traced practically all this coast to within 20 miles of Fury and Hecla Str. Fort Hope was reached 9 Jun. '47, and in their boats the expedition returned to York Factory.
P.—Rae, J., *Narrative of an exped. to the shores of the Arctic Sea*, London, Boone, 1850.

The next twelve years are distinguished by the Franklin Search expeditions. John Rae at Lord Mayor Bay had been within 200 miles of Franklin's ice bound ships, their crews then still hale, their commander living. Franklin's last expedition seems to have been the most record-shy group ever to take to the Arctic. If they did make extensive sledge journeys no "furthest" cairns have been found. One can speculate on their happier fate if they too had visited Lord Mayor Bay and left a record of their imprisoned condition for Rae to find and at once direct relief parties to the right spot.

In the area we are considering there were thirty-three ship-winterings, three summer seaborne voyages, four overland trips and two independent boat journeys. In addition ships wintered in the Bering Sea area, then Russian territory. The year of maximum effort was 1850-51, but it remained for Rae 1853-54 and M'Clintock 1857-59 to bring back the only authentic traces of the lost party.

38. 1847-49—RICHARDSON, Sir J., and John Rae. Overland and boats.
O.—Search between Mackenzie and Coppermine Rivers and on Victoria Island "Archipelago" beyond.
R.—Boats and men left England via York Factory 1847 and travelled on with John Bell of H B C. Leaders left Mar. '48, meeting others in June at Methye Portage. Reached mouth of Mackenzie 3 Aug. and by 3 Sep. near Coppermine. Marched overland to winter quarters prepared by Bell at Ft. Confidence. Richardson left for south May '49. Rae to Coppermine mouth 14 July '49, but unable to cross to Victoria I. in six weeks, returned to Ft. Simpson.
P.—Richardson, Sir J., *Arctic Searching Expedition*, London, 1851, and New York, 1854. *P.P. 1850*, pp. 1-3.

39. 1848-49—ROSS, Sir J. C.; Capt. E. J. Bird; Lieuts. F. L. M'Clintock, R. M'Clure. H.M.S. *Enterprise* (380 tons) and H.M.S. *Investigator* (340 tons).
O.—Search from Lancaster Sound and Cape Walker.
R.—Bad ice season, and only reached Pond Inlet 23 Aug. With difficulty reached Port Leopold (Somerset I.) 11 Sep. '48 and wintered there. Ross and M'Clintock sledged round west of Somerset I. to 72° 38'N. May-June '49. Other parties to north shore of Barrow Str., Fury Beach. Ships not freed till 28 Aug. '49; trying to get west in Barrow Str., became fast in pack and drifted into Baffin B., whence returned to England.
P.—*P.P. 1850*, pp. 58-64.

40. 1849-50—SAUNDERS, James, in H.M.S. *North Star*.
O.—Despatched with provisions to resupply Ross (39).
R.—Being beset in Melville B. wintered at Thule (Greenland). In 1850 attained Lancaster Sd. but unable to reach any harbours due to ice (boat landed Port Leopold), left cache of provisions at Wollaston Is., Navy Board Inlet, and returned to England.
P.—

41. 1849-50—PULLEN, Lieut. W. J. S.; W. H. Hooper; in boats of H.M.S. *Herald* and H.M.S. *Plover*.
O.—From Alaska to examine coast to Mackenzie R.
R.—Left Wainwright 25 July '49, past Pt. Barrow continued in whaleboats only. Reached Mackenzie 2 Sep. after avoiding apparently hostile Eskimo all the way. Went upstream via H B C posts and wintered Ft. Simpson. Instructed there to take over search to Victoria I., which Rae had been unable to do in '49, but got no further east than C. Bathurst and again returned to Ft. Simpson.
P.—Hooper, W. H., *Tents of the Tuski* (Pt. II), London, 1853. *Beaver*, Mar.-June 1947, "Pullen in Search of Franklin."

42. 1849—WHALING SHIPS. Since 1817 British whalers had been visiting the north water (northern Baffin Bay). The Dutch of the eighteenth century had not gone beyond Davis Straits. Several whalers assisted in Franklin's search and in discovery. Capt. Penny in *Advice* (with R. A. Goodsir as surgeon) landed provisions on Wollaston Is. and Capt. Parker in *Truelove* at Cape Hay (Bylot I.). Capt. Gravill penetrated and landed in Jones Sd., as had Capt. Lee in *Prince of Wales* the previous year.
P.—*P.P. 1850*, pp. 69-71, Goodsir, R. A., *An Arctic Voyage to Baffins Bay and Lancaster Sound*, London, 1850.

43. 1850-51—AUSTIN, Capt. H. T.; Capt. E. Ommaney; A. R. Bradford, surgeon; Lieuts. W. H. Browne, F. L. M'Clintock, R. D. Aldrich, F. G. Mecham, V. Hamilton. H.M.S. *Resolute* (410 tons), H.M.S. *Assistance* (430 tons), with H.M. Steamtenders *Intrepid* (Lieut. S. Osborn) and *Pioneer* (Lieut. B. Cator).
O.—Search by Lancaster Sound beyond achievements of Ross (39).
R.—Another slow crossing of Melville B. Capt. Ommaney 23 Aug. '50 found Franklin's encampment at Beechey I. Ships were frozen in mid-Sept. off Griffith I., Barrow St. Many spring sledge journeys made: Ommaney, S. and W. from C. Walker to 72° 40′ N., 103° 25′ W., N.W. coast Prince of Wales I.; Browne, E. coast of Prince of Wales I. to 72° 52′ N.; Aldrich, S. and W. coasts of Bathurst I. to 76° 11′ N., 104° 30′ W.; Bradford, E. coast Melville I. to 76° 23′ and Byam Martin I.; McDougall, Cornwallis I.; M'Clintock, round S.W. Melville I. to Liddon Gulf, 770 miles in 80 days. Apparently considering further search useless returned in 1851, examining Jones Sd. on return.
P.—*P.P. 1852 Additional Papers*, pp. 1-298.

44. 1850-51—PENNY, Capt. W.; Capt. A. Stewart, P. C. Sutherland, R. A. Goodsir; in *Lady Franklin* and *Sophia*.
O.—Sent by Admiralty to examine Jones Sd. and Wellington Channel.
R.—Unable to enter Jones Sd. owing to ice, diverted to Lancaster Sd. Wintered Assistance B. (Cornwallis I.) not far from Austin (43). Energetic spring journeys to Wellington Channel: Stewart and Sutherland, E. shore to 76° 20′; Goodsir, N. coast Cornwallis I.; Penny, after discovering open water in Queen's Channel, returned and completed its survey by boat.
P.—Sutherland, P. C., *Journey of a voyage in Baffin Bay and Barrow Strait*, London, 1852. *P.P. 1852 Additional Papers*, pp. 303-367.

45. 1850-51—DeHAVEN, Lieut. E. J.; E. K. Kane (surgeon), S. P. Griffen, W. Morton; in *Advance* (144 tons) and *Rescue* (90 tons).
O.—Private United States search expedition financed by Henry Grinnell.
R.—Leaving New York 24 May '50 accompanied other vessels through Melville B. Being unable to penetrate W. or S. from Port Leopold, started up Wellington Channel, were frozen in and drifted Oct. '50-June '51, when released in Davis St.
P.—Kane, E. K., *United States Grinnell Expedition*.

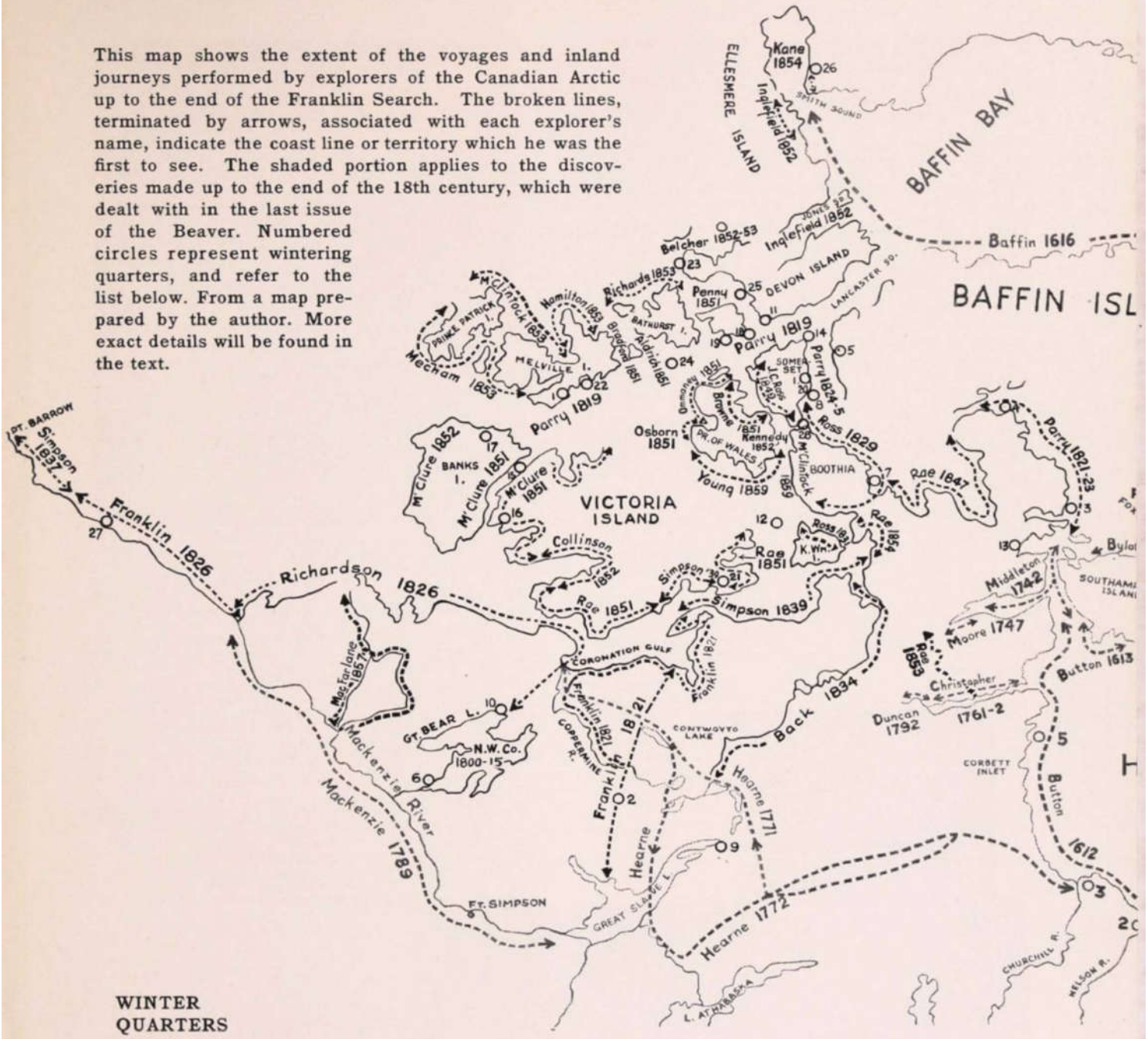
46. 1850-51—ROSS, Sir J. (third voyage), Commdr. G. Phillips in *Felix* and *Mary* (12 tons).
O.—Public subscription expedition (H B C chief subscriber).
R.—Negligible. Wintered with Penny (44). Phillips explored part of Cornwallis I. Yacht *Mary* left at Beechey I.
P.—*Admiralty Arctic Expedns.* Feb. 7, 1851. London, 7 Mar. 1851, pp. 83-88.

47. 1850—FORSYTH, Capt. C. C., W. P. Snow, in *Prince Albert* (89 tons)
O.—Purchased and equipped by Lady Franklin, to examine coasts of Boothia Peninsula.
R.—Accompanied other vessels through Melville B. 21 Aug., reached Port Leopold. Finding ice south of Fury Beach and unable to penetrate towards objective, inexplicably decided to return home. Reached Aberdeen 1 Oct. '50 with intelligence of Franklin's Beechey I. winter quarters discovery.
P.—Snow, W. P., *The Voyage of the Prince Albert . . .* London, 1851.

48. 1850-55—COLLINSON, Capt. R., in H.M.S. *Enterprise*.
O.—To search N. and E. from C. Bathurst via Bering Strait.
R.—Sailing with intended consort *Investigator* (49) Jan. '50, parted from her in Pacific and only passed Bering Str. 12 Aug. Considering it too late to pass Point Barrow, returned to winter at Hong Kong Oct. '50. 12 July '51 back through Bering Str., 25 July passed Pt. Barrow, 26 Aug. entered Prince of Wales Str. discovering records of *Investigator*. 31 Aug. reached Melville Sd., ice packed, so returned round Banks I., thence to Walker B. 15 Sep. to winter. Sledge trips to C. Providence, Melville I. April-June, Collinson Inlet. Ship released 1 Sep. '52, explored Pr. Albert Sd., then to Cambridge B. 26 Sep. for succeeding winter. Sledge trip to Gateshead I. Apr. '53, discovered Rae's cairn (50). Sailed Aug. '53 but had to spend third Arctic winter on Alaskan coast 145° 30′ W. Sailed again 20 July '54 and reached England May '55 after longest, healthiest expedition of the period, most unfortunately forestalled in all its discoveries.
P.—Collinson, R., *Journal of H.M.S. Enterprise . . .* London, 1889. *P.P. 1855*, pp. 943-950.

49. 1850-54—M'CLURE, Capt. R. le M., Lieut. Cresswell, in H.M.S. *Investigator*.
O.—As with 48.
R.—Reaching Bering Str. a week ahead of her consort put *Investigator* a year ahead. 6 Sep. '50 headed N. and E. from C. Bathurst and was beset 12 days later north of Princess Royal Is. in Prince of Wales Str. Reached Melville Sd. by sledge Oct. '50. Spring sledge journeys April-June: Cresswell to N.E. Banks I.; Haswell south to 70° 38′ N. on Victoria I.; Wynniatt to Glenelg B. on north coast Victoria I. Released 17 July '51 but in a month unable to get much further up strait, so sailed S. and W. about Banks I. to Bay of Mercy 24 Sep. '51, where frozen in permanently. M'Clure sledged to Winter Harbour Apr. '52, leaving note which saved him. No release in '52 and another enforced wintering caused scurvy to appear. When about to start sick crews east by sledge, Lieut. Pim from *Resolute* (54) arrived. *Investigator* abandoned 3 June '53 and crew accompanied *Resolute* eastward and thence to England accomplishing Northwest passage.
P.—Armstrong, Alex, *Narrative of Voyage of H.M.S. Investigator*, London, 1857. Osborn, Sherard, *The Discovery of the Northwest Passage by . . . R. M'Clure*, London, 1856. *P.P. 1854*, pp. 24-62.

This map shows the extent of the voyages and inland journeys performed by explorers of the Canadian Arctic up to the end of the Franklin Search. The broken lines, terminated by arrows, associated with each explorer's name, indicate the coast line or territory which he was the first to see. The shaded portion applies to the discoveries made up to the end of the 18th century, which were dealt with in the last issue of the Beaver. Numbered circles represent wintering quarters, and refer to the list below. From a map prepared by the author. More exact details will be found in the text.



WINTER QUARTERS

1. Winter Harbour	Parry		1819-20
2. Fort Enterprise	Franklin		1820-21
3. Winter Island	Parry		1821-22
4. Igloolik	Parry		1822-23
5. Port Bowen	Parry		1824-25
6. Fort Franklin	Franklin		1825-27
7. Victory and Felix Harbours	John Ross		1829-32
8. Fury Beach	John Ross		1832-33
9. Fort Reliance	Back		1833-34
10. Fort Confidence	Simpson		1837-39
	Richardson		1848-49
	Rae		1850-51
11. Beechey Island	Franklin		1845-46
	Pullen		1852-54
12. Victoria Strait	Franklin		1846-48
13. Repulse Bay	Rae	1846-47 &	53-54
14. Port Leopold	J. C. Ross		1848-49
15. Prince of Wales Strait	M'Clure		1850-51
16. Walker Bay	Collinson		1851-52
17. Mercy Bay	M'Clure		1851-53
18. Assistance Bay	Penny		1850-51
	John Ross		1850-51
19. Griffith Island	Austin		1850-51
20. Batty Bay	Kennedy		1851-52
21. Cambridge Bay	Collinson		1852-53
22. Dealy Island	Kellett		1852-53
23. Northumberland Sound	Belcher		1852-53
24. Melville Sound	Kellett		1853-54
25. Cape Osborn	Belcher		1853-54
26. Rensselaer Bay	Kane		1853-55
27. Camden Bay	Collinson		1853-54
28. Port Kennedy	M'Clintock		1858-59

50. 1850-51—RAE, John (second expedition). Overland and by boat.
O.—To search Victoria I. as with his previous attempts '48-'49 and Pullen's in '50.
R.—Wintered Ft. Confidence '50-'51. Left there 25 Apr. '51 and descending Coppermine explored Victoria I. by sledge from 110-117° 17′ W., 940 miles in 40 days. Returned to Kendall R. 10 June, then in July and Aug. by boat completed survey of southern Victoria I. to Pelly Pt.
P.—Rae, J., "Recent explorations along the coasts of Victoria Island," *Journal of R.G.S.*, vol. 22, 1852.

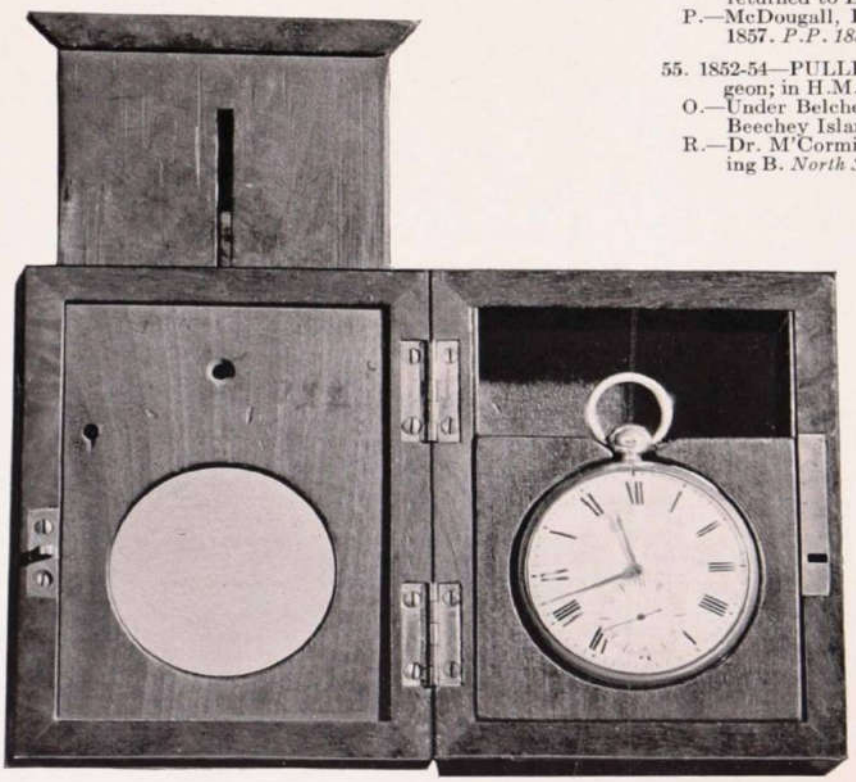
51. 1851-52—KENNEDY, William; Lt. Bellot, French navy; in *Prince Albert*.
O.—Sent out by Lady Franklin to search Boothia (the direction she always maintained was right).
R.—After difficult approach voyage, Kennedy landed Port Leopold 9 Sep. '51, became separated by ice from the ship and was not rescued till 17 Oct., by which time Bellot had established winter quarters in Batty B. Kennedy and Bellot 29 Mar. to 30 May '52 sledged through Bellot Str. (their discovery) across Prince of Wales I. to Ommaney B., thence to C. Walker and back via Port Leopold. Sailed home 6 Aug. '52 via Beechey I.
P.—Kennedy, W., *A Short Narrative of the Second Voyage of Prince Albert*, London, 1853. Bellot, J. R., *Memoirs of Lieut. J. R. Bellot*, London, 1855. *P.P. 1852*, pp. 25-32.

52. 1852—INGLEFIELD, Commdr. E. A., in steam vessel *Isabel* (149 tons).
O.—Outfitted by Lady Franklin.
R.—Sailing up West Greenland, penetrated further into Smith Sd. (to 78° 35′ N.) than earlier discoveries and Jones Sd. to 84° W. but made no landings. After visiting Beechey I. returned by Baffin I. coast, which he left 4 Oct. after abandoning plans to winter.
P.—Inglefield, E. A., *A Summer Search for Sir J. Franklin*, London, 1853. *P.P. 1852*, pp. 33-41.

53. 1852-54—BELCHER, Capt. Sir E., Commdr. G. Richards, Lieut. Sherard Osborn, in H.M.S. *Assistance* and *Pioneer*.
O.—Final admiralty search but still directed to N.W. and in charge of this incompetent officer.
R.—Left Beechey I. 14 Aug. '52 and reached Northumberland Sd. 76° 52′ N. Thence Belcher by boat to North Cornwall I., returning to ship's winter quarters 8 Sep. Spring sledge journeys: Richards north coast of Bathurst I. to Melville I.; Osborn east coast of Bathurst I.; Belcher north coast of Devon to Hell Gate and Graham I. 14 July '53 ships sailed south but beset 1 Sep. in Wellington Channel and wintered there. 6 Aug. '54 ships released but with only a few miles of solid pack between them and Lancaster Sd. Belcher ordered vessels abandoned 26 Aug. All crews of five vessels (55) (56) (50) (57) boarded North Star (55) but arrival of two transports from England allowed distribution on these. Reached Ireland 28 Sep. '54.
P.—Belcher, Sir E., *The Last of the Arctic Voyages*, London, 1855. *P.P. 1854*, pp. 62-85.

54. 1852-54—KELLETT, Capt. H.; Commdr. F. L. M'Clintock; Lieuts. Mecham, Hamilton, Pim, G. Nares, De Bray (French navy); in H.M.S. *Resolute* and *Intrepid*.
O.—A division of and under command of 53, but listed separately as chiefly independent after being ordered to Melville I. to help M'Clure or Collinson.
R.—Failing to get into Winter Harbour, withdrew to Dealy I., where wintered. Autumn sledge parties included Mecham, who found M'Clure's note at Winter Harbour. Pim started for *Investigator* 10 Mar. '53 in 50 below zero, reaching her 6 Apr. Other spring sledge journeys: M'Clintock, N.W. Melville I., Prince Patrick I., from Mould B. to N.W. coast, 1400 miles; Mecham, S.W. Melville I., Prince Patrick, southern half Eglinton I., 1160 miles; Hamilton, N.E. Melville I., 650 miles. With *Investigator's* crews aboard, ships were suddenly released 17 Aug. '53 but drifted in pack till 12 Nov. when stationary for winter 30 miles S.W. of C. Cockburn (Bathurst I.). In spring Mecham travelled to *Investigator* again and down Prince of Wales Str., where Collinson news found, 1336 miles in 70 days. By Belcher's orders ships were abandoned in June '54 but *Resolute* drifted out to Davis Str. and was picked up Sep. '55 by Capt. Buddington of American whaler *George Henry*, and returned to England.
P.—McDougall, F., *Voyage of H.M.S. Resolute*, London, 1857. *P.P. 1854*, pp. 85-98. *P.P. 1855*, pp. 498-641.

55. 1852-54—PULLEN, Capt. W. J. S.; R. M'Cormick, surgeon; in H.M.S. *North Star*.
O.—Under Belcher's orders (53) acted as base vessel at Beechey Island.
R.—Dr. M'Cormick by boat Aug.-Sep. '52 examined Baring B. *North Star* aground Sep.-June '53. Pullen visited



The Franklin chronometer, used on Franklin's second expedition of 1825-27, and on three Franklin search expeditions—Richardson's of 1848-9; Inglefield's of 1853 in H.M.S. "Phoenix"; and Anderson's of 1855. It was presented to the H B C museum by Mrs. E. Rickards. (Beaver, March 1949.)

The "Resolute" nipped by the ice in Baffin's Bay, June 26, 1852. The other ships, left to right, are the "Pioneer," "Assistance," "North Star," and "Intrepid." From McDougall's "Voyage of H.M.S. 'Resolute'."

Assistance by boat July '53, and Mar.-Apr. '54 crossed to Port Leopold by sledge. *Investigator's* crews arrived end Apr. '54. Sailed for home Sep. '54 with crews of most of squadron.
P.—*P.P. 1854*, pp. 98-147 and pp. 187-225.

56. 1853—INGLEFIELD, Capt. G. (second voyage), with Lt. Bellot, who was drowned; in H.M.S. *Phoenix* and *Breadalbane* transport.
O.—Supply vessels for Belcher's squadron.
R.—Reached Beechey I. 8 Aug. '53 and landed stores. Lt. Bellot going by boat up Wellington Channel with despatches for Belcher was accidentally drowned. *Breadalbane* nipped and sunk 21 Aug. *Phoenix* left for England 3 days later.
P.—*P.P. 1854*, pp. 11-18.

57. 1853-54—RAE, John (third expedition). By boat and overland.
O.—Sent by H B C to survey west coast of Boothia.
R.—Examined Quoich R. N. of Chesterfield Inlet July-Aug. '53, reaching lat. 66. Wintered Repulse B. Set out by dog team from here 31 Mar. '54. Met Pelly B. natives who had news of Franklin's men and relics. Crossed to Castor and Pollux R. then to C. Colvile on W. Boothia. Returned to Repulse B., thence York Factory (31 Aug. '54) with first news of locale of disaster.
P.—Rae, J., *R.G.S. Journal*, vol. 25, 1855. *P.P. 1855*, pp. 831-844.

58. 1853-55—KANE, Dr. E. K., Dr. I. I. Hayes, W. Morton, in *Advance*.
O.—Private United States expedition to search strait discovered by Inglefield.
R.—Entered Smith Sd. 7 Aug. '53 but heavy ice resulted in reaching only 78° 37′ (Rensselaer Harbour) by end Aug. Early spring journey by Kane fruitless but Hayes reached 79° 45′ on Ellesmere I. and Morton 81° on Greenland. A boat attempt to join Belcher summer 1854 failed and second winter with great hardships and mutinies resulted. 17 May '55 retreat from abandoned ship started, and by sledge and boat reached Danish Settlements Aug. Picked up by Hartstein's relief expedition.
P.—Kane, E. K., *Arctic Explorations* . . . Philadelphia, 1856.

59. 1855—ANDERSON, James, J. G. Stewart. By canoes.
O.—H B C expedition to follow up Rae's discoveries (57) at Backs R. and King William I.
R.—Left Fort Resolution 22 Jun. '55. Reached Montreal I. at mouth of Back R. 31 July. A few relics found but unsoundness of canoe, lack of any interpreter and shortness of season made results negligible. Started back by same route 10 Aug.
P.—"Extracts from Anderson's Arctic Journal"—*Journal R.G.S.* Vol. 26, 27—1856. *Canadian Field Naturalist*, May 1940—Mar. 1941, "Chief Factor J. Anderson's Journal of 1855."

60. 1857—MACFARLANE, R. Overland by canoe.
O.—To explore Anderson River on behalf of H B C.
R.—Left Fort Good Hope 4 June '57 by canoe via Canot L., Lockhart (Carnworth) R., Anderson R. Forced to return just short of sea by hostile Eskimo. Ascended Anderson above Lockhart and up "Ross" R. to Colvile L. and back overland to Good Hope.
P.—MacFarlane, R., *Canadian Record of Science*, No. 1, vol. 4., Montreal, 1890.

61. 1857-1859—M'CLINTOCK, Capt. F. L., Capt. Allen Young, Lt. W. R. Hobson, in *Fox* (177 ton steamer).
O.—Private expedition of Lady Franklin to find traces of Franklin on King William I.
R.—Frozen in Melville B. 31 Aug. '57 drifted south and only released in Davis Str. 26 Apr. '58. Returning immediately to the task, reached Pond Inlet (investigated) end July '58. Erected memorial Beechey I. 15 Aug. Turned back by ice in Peel S., went around to Bellot St. 21 Aug. Despite many efforts could not get ship beyond west end of strait. M'Clintock by dog team met natives near N. Magnetic Pole 1 Mar. '59, obtained relics and information. 2 Apr. '59 main parties off: M'Clintock by W. Boothia, E. King William to Montreal I., then west about King William; Hobson W. coast of King William, finding only Franklin written record at Victory Pt.; Young completed survey S. coast Prince of Wales I. Released 4 Aug. '59, sailed 15 Aug. for England.
P.—M'Clintock, F. L., *Voyage of the Fox* . . . London, 1859.

This closes the Franklin Search, fittingly with the successful expedition of the most active of the naval officers engaged on it. A heroic age had ended, but another, more efficient age was about to begin—to close the last gaps in the geographical knowledge of the Canadian Arctic.

The next and final instalment will complete the story of Canadian Arctic exploration.

Book Reviews

DOUGLAS OF THE FIR, a Biography of David Douglas, Botanist, by Athelstan George Harvey. Harvard University Press, Cambridge, Mass., and S. J. Reginald Saunders, Toronto, 1947. 300 pages.

AMONGST all the early explorers of the vast hinterland of the Pacific Slope there is no more arresting figure than that of David Douglas. Born in 1799, the son of a Scottish stonemason, leaving school at ten to become an apprentice gardener, he had, at the age of thirty, won an honoured place in the world of science and exploration. Although he died at the early age of thirty-five, he ranks among the five or six greatest botanical explorers of North America, sending home some 7000 species of plants, a large proportion new to science, many of which he classified and named himself. Even this work was secondary to the selection of such as might be of garden value and the obtaining of seed to send to England. In this he more than satisfied his sponsors, the Horticultural Society of London, for he introduced over two hundred species to cultivation, some of which are, perhaps, now commoner in British gardens than in their native habitats.

His wanderings extended from Fort St. James, in northern British Columbia, to southern California and Hawaii. During this period he kept a copious journal and maintained a correspondence with his patrons whenever opportunity offered. Yet, it is to be feared, he is little known to the reading public. Even the famous timber tree of the Pacific Northwest—the Douglas Fir—is quite commonly believed to have received its name to honour Sir James Douglas, the first governor of British Columbia. Indeed, our author states that it was his surprise at finding this was not the case that led him to undertake this work.

There are several reasons for this lack of knowledge. The literature is widely scattered in publications originating in Britain, America and Hawaii, much of it in journals of limited circulation and out of print for over a century. His *Journals* were only published in 1914 and were soon out of print. Most important of all, perhaps, the writing of an adequate biography demanded an acquaintance with two fields of inquiry, the historical and the botanical, a qualification which is none too common.

This work, therefore, is most welcome. It is the first full-length biography of Douglas and fills a gap in both the historical and botanical literature of the Pacific Slope. It is a well written narrative, not too technical for the general reader, but with a very full documentation for the historical and botanical student. The author has himself travelled over much of Douglas's trail and helps the reader by giving the modern names of rivers and other geographical features, and of the settlements which have sprung up in what was then an aboriginal wilderness.

Much new information has been gained from the archives of learned societies, the Hudson's Bay Company, and the correspondence of contemporary scientists. This is especially true of the period spent in London between the two western explorations.

In his western travels, Douglas was naturally brought into close association with the Hudson's Bay Company. On both voyages, he travelled to the Pacific Coast on a Company ship. The Company posts were his only contact with civilization and the source of his supplies. Going home from his first expedition, he made the long trek overland with the brigade from Fort Vancouver to York Factory on Hudson Bay.

This work can be confidently recommended to all those who are interested in the epic story of North American exploration, while, for the student of the history of the Pacific Slope, we believe it to be one of the most important books published in recent years. —*J. W. Eastham.*

ARCTIC MOOD, a Narrative of Arctic Adventures, by Eva Alvey Richards, illustrated by the author. The Caxton Printers, Caldwell, Idaho, 1949.

MY first impression of this book, derived from the dust jacket, was definitely unfavourable. I knew the scene was laid in Alaska, but here was a little sketch which showed a woman with a Greenland Eskimo head-dress, a husky young man who did not look Eskimo at all, a cleric straight from the pages of the History of the Spanish Inquisition, a snow-house or two like no other snow-houses on earth, a "white man's igloo" not at all suited to the climate or the Arctic winds, and a most fashionable young thing, straight from Bonwit Teller with a modish suitcase and an even more modish coiffure, presumably the author just arriving at the scene of her labours.

Things could never have been like that, I knew; and I wondered if the author might be more familiar with the subject than the illustrator seemed to be. My fears were not allayed when I noted that the author was also the artist!

Inside, the situation was much better, and actually the author (who bears no resemblance to the figure on the jacket) both writes and draws with considerable skill. The portraits of various Eskimos, school girls and others, are excellent, full of character and life, and so too are the little sketches used for "chapter" headings. N.B.—There are no chapters!

Being school teacher, nurse, and general adviser to an Eskimo village of a couple of hundred in the more remote parts of Alaska is somewhat of an undertaking. "How important it is," comments the author, "to appoint the right men to the school positions." How important indeed, but what about the right women? That she fitted the description, there is no doubt, and one can but admire her courage, efficiency, and energy.

Her writing is lively and sincere, and she has a neat gift for coining words. A journey by dog-sled is made

all the more convincing when you hear the "whang" of the whip, and the "chinkle" of moving ice as the sled "sleeks" along.

There are occasional purple passages in which the author regrettably tries to do some really fine writing. Less forgivable, perhaps, is her occasional lapse in the field of language, such as "a phenomena," "a strata," but perhaps she suffered from the example of the Chief of the Alaska Native Schools who greeted her with "Looks like you hold the ticket for Wainwright!"

The lack of a map, especially as the end papers are blank, is most distressing; perhaps we can forgive that, but the failure to divide the book up into chapters makes it difficult to find a passage again if it is needed. To simplify things for the Helmericks, may I call their attention to the list of supplies on pages 143 to 146? I always get worried when they start off with not much more in their pockets than their hands. —*Douglas Leechman.*

THE CANOE AND YOU, by Ronald H. Perry. J. M. Dent, Toronto, 1948.

THIS small volume covers the subject of canoeing in a most comprehensive way. It is plain, however, that the author regards canoe paddling as a sport—as indeed it is to the great majority of its participants. Those who used the canoe for many years and over many thousands of miles in the course of their daily work, before the advent of the outboard motor (as this reviewer did), may be inclined to take issue with him on certain points.

Regarding such questions as type of canoe, style of paddle, and species of wood in it, there can be no set rule. These things are a matter of personal preference. Most working canoeists prefer a hardwood paddle with some weight and drive to it. And that matter of the short stroke: surely no canoeist worth his salt will dispute its superiority. "Don'ts" are always tiresome, even if valuable, but here's another one: Don't leave a canoe right side up, on land, unattended, for any length of time. Turn it over and let it drain. Don't give a moose an opportunity to put a hoof through your canoe, as has happened more than once.

In chapter 5, "The Art of Paddling," the author writes: "The paddler kneels on the bottom of the canoe, knees wide apart, with his seat resting against the thwart. . . . . It is satisfactory for long trips. . . ." Good advice for the beginner, perhaps, until he has developed a sense of balance. But beyond that, no! Why suffer? And what are the canoe seats for anyway?

In the same chapter something might have been said about the use of muscles in paddling. The uninitiated might suppose that the arm muscles are the most important; but not so. If the canoeist is paddling correctly, he will find his abdominal muscles coming into play more than any others. And what a fine feeling of well-being is experienced when, on a long trip, the soreness has gone and he knows that he can "take it" and enjoy it.

In conclusion, the author remarks so truly on the tonic effect of canoeing and the need for more and better instruction in this form of recreation to the end that it may be more popularly enjoyed in safety. In presenting *The Canoe and You* to the public, Mr. Perry has made a valuable contribution in this direction.—*Sidney N. Cooper.*

THIS IS NEWFOUNDLAND, edited by Ewart Young. Portraits by Karsh, photographs by Cyril Marshall. Ryerson Press, Toronto, 1949. 105 pages.

CANADIANS who feel that it is their duty to learn something about their new province will do well to get a copy of this book. And if they do, they will find that the duty is a pleasure. Here are the elements of that little-known island which guards the eastern approaches to North America—scenic photos that capture the essential beauty of the rugged outports; a brief history of the island from its earliest days (by Brian Cahill of *Atlantic Guardian*); and character studies by the incomparable Karsh of twenty of today's prominent Newfoundlanders. J. R. Smallwood, the tenth province's acting premier, has written biographical sketches to accompany the portraits; and the volume is rounded off—or rather introduced—by two of E. J. Pratt's poems.

The result is a very happy one. Both the letterpress and the half-tone reproductions are of a high order. If there is a noticeable fault, it is the lack of close-ups among the Marshall photographs. Out of the whole fifty, there are only three that do not picture distant scenes, and only one of these is a portrait. The essence of Newfoundland lies so much in the character of her outport fishermen that one would welcome a few typical weatherbeaten faces, interspersed among the long-shots of the lonely settlements along the shores. Yet these by themselves are enough to make any reader who knows and loves the Tenth Island, homesick for Newfoundland.—*C.W.*

SHOTS AT WHITETAILS, by Lawrence R. Koller. Little, Brown & Co., Boston, 1948. 359 pages.

IN this age of speed, haste and general high pressure, it is a delightful change to pick up a book such as this one and enjoy many happy hunts with the author. The art of the "still" hunt is his first love, and so it should be. Nothing can be more satisfying than to pit one's wits against such a crafty and clever animal as the whitetail deer and come home with a worthy trophy. A buck deer taken by this method gives the hunter a much greater amount of satisfaction than one taken by any other method.

Unfortunately, far too few hunters know the thrill of the "still" hunt. To most a deer hunt consists of a hasty drive into deer country, a hurried march—in company with several others—over far too large an area, and the taking of some game, if any be seen, by sheer fire power alone. Few men now know, or care to know, how to employ themselves in a proper "still" hunt. The author of this book tells us how. This reviewer hopes a great many deer hunters, old-timers and greenhorns alike, will read this book, and so plan their next hunt that they may come to learn the feeling of achievement that follows the successful conclusion of such a hunt. While the locale of most of the book is in the Eastern United States, the habits of the whitetail deer are so similar in all areas that one can confidently apply the author's rules and observations to whatever locality he may be hunting in.

For those who hunt by the "drive" method, the author has a special chapter, and this takes in group and club hunting. The safety angle is properly stressed in group hunting, as it should be, and it is a generally interesting and informative section of the book.

There is a wealth of "know-how" on almost every angle of a trip after deer in this volume. Where and how to find the vital spots of your target; how to dress your trophy; how to get it to camp, and how to make the most of all parts of your venison are all ably described and make delightful reading. If you are an archer, there is much for you here and for most of us who hunt with rifles there is a wealth of knowledge as to the proper rifle and proper load to be used, the sights that will bring the best results, and just about everything else we need to know.

There are hints on gunsmithing for the hunter; how to tan and dress your deerhide; how to mount the head. Every big-game hunter should have a copy in his library.—*H. D. Whellams.*

Summer Packet

Sturgeon-heads

George M. Douglas, author of *Lands Forlorn*, who is an accomplished northern traveller specializing in the construction of small boats and canoes, has pointed out that sturgeon-heads were carvel-built—not clinker-built as stated in Richard Glover's article on York Boats in the last *Beaver*. That is to say, the planks did not overlap like clapboards on a house, but formed a smooth side. Professor Glover, who (like the editor) has seen sturgeon-heads only in photographs, mistook the tarred seams along the boat's sides for shadows—hence the error. Mr. Douglas illustrated this point with some of his own excellent photos.

He also pointed out that scows were not always broken up at the end of their down-stream journey. Sometimes they were towed back upstream. A small point, no doubt, to the vicarious northerner, but one not to be overlooked in the true story of northland transportation.

Stabbing Affray

To condense the story of the Company in Winnipeg into two or three thousand words is a difficult job. Mrs. MacLeod, who does that in this issue, observes that she has had to leave out most of the little human incidents that add life to such an account. One that casts some light in the diversions which enlivened the otherwise humdrum round of duties at Fort Garry concerns a quarrel between an Indian and a half-breed outside the Company's retail store of the sixties. J. J. Hargrave (son of Mrs. MacLeod's Letitia) relates the incident in his *Red River*:

"On the 18th July [1866]" he writes, "an altercation between a Saulteaux Indian resident near Fort Garry and a half-breed named John Desmarais resulted in the latter stabbing the former three times in the abdomen. The occurrence took place within the walls of Fort Garry, close to the door of the public sale shop into which the wounded man immediately walked, holding his protruding intestines in his hand, and demanding from the salesman on duty, who was naturally a good deal shocked at the unusual counter transaction, some cotton to bind up his wound. The poor man died on the ensuing morning and Desmarais was thrown into prison to wait his trial."

The trial took place at the August Quarterly Court, and Desmarais was sentenced to hang. Indian relatives of the murdered man, anxious to make sure that the prisoner should not escape, pitched their lodges near the jail and kept watch. But the settlers, out of sympathy for Desmarais' family, petitioned the governor to commute the sentence to banishment for life. Somehow the prisoner was spirited away past the vigilant Indians, and being "transmitted from one post of the Company to another, was ultimately restored to liberty in New Caledonia."

Fortunately, such incidents are of rare occurrence in the Company's Winnipeg sale shop of to-day.

Contributors

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